



**MALLA REDDY INSTITUTE OF  
ENGINEERING AND TECHNOLOGY**  
AUTONOMOUS CAMPUS

**4<sup>th</sup> INTERNATIONAL CONFERENCE ON  
ENGINEERING AND ADVANCEMENT IN TECHNOLOGY**

(June 16<sup>th</sup> & 17<sup>th</sup>, 2023)

in association with

**Organisation of Science and Innovation Engineering &  
Technology (OSIET)**

&  
in collaboration with  
**Samarkand State University,  
Uzbekistan**



**MALLA REDDY INSTITUTE OF  
ENGINEERING AND TECHNOLOGY**  
AUTONOMOUS CAMPUS

Permanently affiliated to JNTUH, Approved by AICTE,  
Accredited by NBA NAAC 'A' Grade  
Maisammaguda, Dhulapally, Secunderabad - 500100

4<sup>th</sup> INTERNATIONAL CONFERENCE ON  
**“ENGINEERING AND ADVANCEMENT IN  
TECHNOLOGY– 2023”**

(ICEAT - 2023)

JUNE 16<sup>th</sup> & 17<sup>th</sup> 2023

ORGANIZED BY

**MALLA REDDY INSTITUTE OF ENGINEERING AND  
TECHNOLOGY (AUTONOMOUS)**

Approved by AICTE, Permanently affiliated to JNTUH

Accredited by NBA & NAAC

Maisammaguda, Gundlapochampally (Village), Near Dhulapally, Medchal Malkajgiri (District),  
Secunderabad – 500 100

<https://www.mriet.ac.in/>

In Association with

**ORGANIZATION OF SCIENCE AND INNOVATIVE  
ENGINEERING & TECHNOLOGY (OSIET)**

Chennai, India

[www.ijsiet.org](http://www.ijsiet.org)

In Collaboration

**Samarkand State University**

Samarkand, Uzbekistan

[www.samdu.uz/en](http://www.samdu.uz/en)

## **ICEAT 2023**

Proceeding of 4<sup>th</sup> International Conference on Engineering and Advancement in  
Technology

**16<sup>th</sup> & 17<sup>th</sup> JUNE, 2023**

**INTERNATIONAL COLLABORATION – SAMARKAND STATE  
UNIVERSITY, UZBEKISTAN**

### **Hybrid Conference:**

Malla Reddy Institute of Engineering and Technology,  
Approved by AICTE, Permanently Affiliated to JNTUH  
Accredited by NBA & NAAC  
Secunderabad, Telangana, India

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# MALLA REDDY INSTITUTE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution - UGC, Govt. of India )

(Sponsored by Malla Reddy Educational Society)

Approved by AICTE, New Delhi, Recognized Under 2(f) & 12(B)

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## Message



**Sri Ch. Malla Reddy Garu**

**Founder Chairman**

**MRGI**

I am happy to note that Malla Reddy Institute of Engineering and Technology is organizing International Conference on Engineering and Advancements in Technology ICEAT 2023. I hope this conference will provide an opportunity for the meeting of International Researchers, Engineers, Scientists, and specialists in the various research and development fields of Engineering and Technology. I hope eminent speakers will cover the theme computation and innovation from different perspectives and this conference will offer suitable solutions to the global issues.

I congratulate the supporting organizations, who have provided support to this conference financially and technically, in spite of the present pandemic scenario.



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## Message



**Dr Ch. Bhadra Reddy**

**Chairman, MRGI**

It is a matter of great pleasure to note that the Malla Reddy Institute of Engineering and Technology is going to organise the 4<sup>th</sup> International Conference on Engineering and Advancements in Technology from June 16-17, 2023. It is a matter of great pride that the organisers of the conference have been successful in creating such a huge impact on the target participants in such a short span of time. The overwhelming response received from all over the country is amazing. It is heartening to acknowledge the fact that the conference has an international collaboration with Samarkand State University, Uzbekistan. It is a great achievement on the part of the organisers to arrange the publication of the Proceedings of the Conference. The availability of the papers at SCOPUS journals would add another dimension to the overall impact of this conference on a larger section of research community all over the world. It is also encouraging to note that a couple of foreign delegates of International repute in the field are going to deliver invited lectures and key-note address in this Conference.

I wish ICEAT 2023 a grand success!!



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## Message



**Shri Ch. Mahender Reddy**  
**Secretary, MRGI**

I am delighted in acknowledging the International Conference on Engineering and Advancements in Technology ICEAT 2023 organized by Malla Reddy Institute of Engineering and Technology. I appreciate the organizing committee for showing a keen interest in organizing a successful Conference and contributing new ideas and research findings.

I wish them for their endeavors to spread knowledge. I look forward to the contributions of our speakers and participants alike to developing innovative solutions to these dynamic and unprecedented challenges in Engineering and Technology.



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## Message

**Sri P.Praveen Reddy**  
**Director, MRIET**



As Director, on behalf of the Malla Reddy Institute of Engineering and Technology, I am happy to note that College is organizing an International Conference on Engineering and Advancements in Technology on June 16-17, 2023.

Today, the world is changing at a fast pace, and the borders between countries are becoming more and more transparent. The problems occurring in the society are more complex than those in the past. In order to solve these problems, we need a multidisciplinary approach on a global scale. This is evident in the existence of this Conference, and it is also clearly apparent in the collaboration that is already taking place among the nations around the world

I also congratulate the organizers, participants from our colleges and other colleges for their efforts in organizing and participating in this conference and wish the conference all the success.



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## Message



**Dr. M. Ashok**  
**Principal**

Warm and Happy greetings to all!!

I am immensely happy that our college is organizing an International conference on Engineering and Advancements in Technology from June 16-17, 2023 and is going to present a collection of various technical papers in the proceedings.

The conference is organized around a competitive call for sessions and papers. The main theme of the Conference includes interrelated issues, each of them calling for a variety of disciplinary approaches.

We are excited and honored to have a chance to work with all the co-hosts, discussants, chairs, and moderators of this conference. I hope that this unique international and multidisciplinary conference will provide our participants with a truly transformative experience through a variety of knowledge and perspectives so that the complex problems in our society can be improved.

I also congratulate the organizers, participants from our colleges and other colleges for their efforts in organizing and participating in this conference and wish the conference all the success.





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## Message

**Dr. B.Dhanalaxmi**  
**Dean- Research and Development**



It is my privilege and honor to welcome you all to the “International Conference on Engineering and Advancements in Technology”. This conference was in association with Organisation of Science & Innovative Engineering and Technology (OSIET) & in collaboration with Samarkand State University, Uzbekistan.

The main goal of organizing this conference is to share and enhance the knowledge of each and every individual in this fast-moving Information Era. We have given a good opportunity for those who have a thirst in knowing the present technological developments and also share their ideas. Additionally, this conference will also facilitate the participants to expose and share various novel ideas. The conference aims to bridge the researchers working in academia and other professionals through research presentations and keynote addresses in current technological trends. It reflects the growing importance of Intelligent Computing systems as a field of research and practice for contribution and better opportunities. You will get ample opportunities to widen your knowledge and network.

The R & D center of Malla Reddy Institute of Engineering and Technology (Autonomous), Hyderabad aims to nurture sustainable academic and Research culture in emerging areas and to develop research capability of UG, PG students and faculty of institute by participating in conferences, seminar, etc..so as to encourage them to take up the research projects. R&D activities are encouraged at both departmental as well as institute level. Research centers equipped with required infrastructure and other facilities have been established in all departments for achieving the goals. These R&D centers with inputs from industry and funding agencies would develop the vision of research. The performance of these R&D centers is measured in terms of funding received, industrial consultancy, publications, patents and conferences/seminars organized. The institute provides travel grant to the faculty and the students to attend International/National conferences and training courses. Cash rewards are given to the faculty and the students for research publications and for Patent filling & award. The faculty members are encouraged to pursue their doctoral programmes from other institutes of repute. With continual and visionary support from the college management and efforts of the faculty and the students, the R&D culture is really picking up day by day in the institute.

I want to thank in advance the conference committee for extending their valuable time in organizing the program and all the authors, reviewers, and other contributors for their sparkling efforts and their belief in the excellence of ICEAT 2023.

I welcome you to be part of our endeavor to offer you an excellent platform to actively participate in Research and Innovation activities at Malla Reddy Institute of Engineering and Technology (Autonomous), Hyderabad.

I add my best wishes for a successful and fruitful conference and my thanks to all organizers.



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## Message

Dr.MD ASHFAQUL HASAN

**Head, Department of Computer Science & Engg.**



It is a matter of great pleasure for me to welcome you all to the 4th International Conference on Engineering and Advancement in Technology (ICEAT 2023) on 16<sup>th</sup> & 17<sup>th</sup> June 2023, organized by MRIET (A), Hyderabad.

Education is always a sign of development and learning. It should be research-oriented helping society to create something new. Thinking in an innovative and new way is significant to cope with technological changes. This Conference provides a forum for scholarly discussion on advance computing. It is also relevant for exploring and searching various aspects of education through the appropriate application of information technology.

The response of contributors and likeminded educational fraternity showing their keen interest in this conference is highly motivating. Presentation of such research papers is extremely beneficial for research scholars and stimulating factor for us to organize such conferences frequently in future. I sincerely offer my earnest gratitude to those who have contributed through their research papers at the conference. I am sure that the conference would achieve its objective by providing a suitable platform for learning and experiencing the latest advancement in the field of industry. The cohesive efforts of a dedicated and committed team become necessary for organizing such conferences. We are fortunate enough for having such a hardworking team with us.

I wish for the grand success of the conference.

**MALLA REDDY INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**(UGC – Autonomous Institution)**



**Dr.P.SRINIVAS**

**Head, Department of Information Technology**

It gives me immense pleasure to welcome the academic luminaries, thoughtful research scholars, corporate doyens and seasoned policy makers to the “International Conference on **4th INTERNATIONAL CONFERENCE ON ENGINEERING AND ADVANCEMENT IN TECHNOLOGY (ICEAT 2023)**” at **Malla Reddy institute of Engineering and Technology, Hyderabad**. The department Information Technology is one of the pioneering departments of this institution. We offer our students good educational experience that combines intellectual rigor and cross-disciplinary breadth in an organized, student centered environment Department of Information Technology’s primary focus is to impart technical know-how to students, promote their problem-solving skills and innovation of new technologies. Department conducts co-curricular activities to provide wide spectrum of options to the students to pursue their interests. Students are encouraged to undertake various research projects. Department has an exceptional approach to bridge the gap between academics and industry requirement and in the process has partnered with many MNC’s like IBM, ORACLE etc for skill development. Our department maintains active research groups for carrying out collaborative and interdisciplinary research.

Looking forward for a great networking session during the Conference at MRIET. Thanks!

**MALLA REDDY INSTITUTE OF ENGINEERING AND TECHNOLOGY  
(UGC- Autonomous Institution)**



**Dr. P.Sampath Kumar**  
**Head,Dept. of Electronics and Communication Engg**

**ICEAT 2023** provides an opportunity for the meeting of International Researchers, Engineers, Scientists, and specialists in the various research and development fields of Engineering and Technology. I am privileged to say that this conference will definitely offer suitable solutions to the present problems that human kind is facing.

I am grateful to the organising members and in particular Dr. B.Dhanalaxmi for taking the conference to next level with her hard work and commitment.

I wish all the best to all the paper presenters



It is with great pleasure and enthusiasm that I announce my role as the Keynote Speaker for the upcoming Fourth International Conference on Engineering and Advancement in Technology 2023 (ICEAT, 2023), which will take place on 16th & 17th June 2023, at Malla Reddy Institute of Engineering and Technology (A), Hyderabad, Telangana, India. This conference will undoubtedly provide an exceptional platform for a diverse group of professionals, including academicians, industrialists, students, and research scholars, to exchange critical and innovative ideas and experiences. The goal of the conference is to contribute to the betterment of industrial development, promote future growth, and advance the progress of the participating and practicing community. I feel truly honored and privileged to be a part of this momentous event, and I extend a warm welcome to all delegates who will be participating. I am also grateful to the organizers and sponsors who have made this conference possible and have demonstrated a noble commitment to the advancement of technology.

I have complete confidence that the conference will be intellectually stimulating, informative and an enjoyable experience for all attendees. Let us come together to make this conference a resounding success that will contribute to the growth and development of the field of engineering and technology.

**DR. ALDRIN KARUNAHARAN**  
**ASSISTANT PROFESSOR**  
**PROCESS ENGINEERING**  
**INTERNATIONAL MARITIME COLLEGE OMAN**  
**OMAN**



Technical Education is the backbone of every nation and is the stepping stone for a country to move into the niche of a developed nation. India Entrepreneurs are emerging as a global Entrepreneur, Indian figuring increasingly in the list of the richest persons in the world. India's knowledge power making India as a preferred destination for outsourcing knowledge services from India. India is fast emerging as a destination for world class R&D centres and innovation hub. Young friends they are the signs of even a brighter tomorrow for India and its people.

You must therefore be highly excited to make your own contributions to the growth and development of India as a dream.

As a Keynote speaker of the 4<sup>th</sup> International Conference on Engineering and Advancement in Technology 2023 (ICEAT'23) I congratulate all the participants who have contributed their technical articles in the proceedings.

**DR. S MOHANKUMAR**  
**DIRECTOR- RESEARCH AND INNOVATION**  
**CMR UNIVERSITY**  
**BANGALORE, INDIA**



It's my immense pleasure and honor for participation and interaction into the 4th INTERNATIONAL CONFERENCE ON ENGINEERING AND ADVANCEMENT IN TECHNOLOGY 2023 (ICEAT'23), organized by Malla Reddy Institute of Engineering and Technology (A), Hyderabad, Telangana, India during June 16-17, 2023. We are living in the era where we all have some roles to play and responsibilities to bear towards the growth of our society and nation's progress. The importance of this conference must be emphasized, that will give a applaudable platform for Students, Research scholars, academicians and industrialists to exchange their innovative and novel research experiences.

It's a great honor and privilege to be part of this conference and I would like to delight to welcome all the distinguished participating spokespersons. I must mention my deep sense of appreciation for the organizers and sponsors for coming up with such a noble thoughts. We should disseminate the sustainability concept and further encourage, collaborate, and conduct research and development as a major stakeholder of this transformation for a safe and sustainable future.

**DR. ABHISHEK KUMAR**  
**ASSISTANT DIRECTOR**  
**CSE, UIE**  
**CHANDIGARH UNIVERSITY**  
**PUNJAB, INDIA**



I am delighted to write this message for 4th International Conference on Engineering and Advancement in Technology 2023 (ICEAT'23) is being organized by Malla Reddy Institute of Engineering and Technology (A), Hyderabad, Telangana during June 16-17, 2023. It is my great pleasure and honour to deliver Guest address and to serve as the Session Chair for ICEAT 2023. I would like to welcome all delegates from all over the country to attend and gain information in diverse field through this conference in digital platform. I hope this conference will churn out thoughts and exchange ideas which will direct researchers, Academicians, Students and Industrialist for the near advanced technological Evolution. My best wishes to all of you for seeking this path towards gaining and spreading knowledge.

I wish all the organising committee and scientific committee for their efforts to make this conference a grand success.

**DR. S.VAITHYASUBRAMANIAN**  
**ASSISTANT PROFESSOR**  
**PG AND RESEARCH DEPARTMENT OF MATHEMATICS**  
**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE**  
**CHENNAI, INDIA**





Warm wishes to all,

It is my great pleasure to announce my role as a Keynote speaker for the upcoming 4<sup>th</sup> International Conference on Engineering And Advancement In Technology (ICEAT 2023) at Malla reddy Institute of Engineering Technology, Hyderabad, Telangana, India to be organized on 16<sup>th</sup> and 17<sup>th</sup> June 2023. The conference will serve as a platform for the Academicians and Researchers for exchanging the ideas.

I am very much confident that the conference will be an exceptional event that can help the researchers to form a network. The network can subsequently help them to enhance their skills in the future. I am also thankful to the organizers of the conference for inviting me to this conference.

**DR. P. BHAGATH M.TECH (IITG), PH.D(IITG)**  
**ASSOCIATE PROFESSOR**  
**DEPARTMENT OF CSE**  
**LBRCE MYLAVARAM**

# **ICEAT 2023**

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Dr.Christo Ananth, Professor, Samarkand State University, Uzbekistan

## **SPEAKERS**

Dr. K. Aldrin Karunaharan , Assistant Professor, Department of Process Engineering, International Maritime College Oman, Sohar, Oman

Dr.Abhishek Kumar, Assistant Director, CSE, UIE, Chandigarh University, Punjab

Dr. Vaithyasubramanian.S, Assistant Professor, PG and Research Department of Mathematics, DG Vaishnav

Dr. S. Mohan Kumar, Director- Research and Innovation, CMR University, Bangalore

Dr. P Bhagath, Professor, Department of CSE, Lakireddy Bali Reddy College of Engineering, Mylavaram, AP

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Ramaiah Institute of Technology, Bangalore, Karnataka

Dr. N. Sasirekha, Associate Professor, Department of Electronics and  
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46	ICEAT23185	AI-POWERED NEWS WEB APP
47	ICEAT23221	RECOMMENDATIONS FOR ENSURING EQUITABLE AND COMPARABLE PARAGRAPHS IN A RESEARCH PAPER

S.NO	PAPER ID	PAPER TITLE
48	ICEAT23149	DESIGN AND ANALYSIS OF WALLACE TREE BASED MULTIPLIER USING APPROXIMATE ADDERS FOR IMPROVING THE EXECUTION RATE OF ELECTRONIC CIRCUITS
49	ICEAT23208	PERFORMANCE EVOLUTION OF SLOTTED TOOL ELECTRODE IN ELECTRIC DISCHARGE DRILLING OF INCONEL 718
50	ICEAT23165	REMEDIAL MEASURE TO REDUCE THE EFFECTIVENESS OF BREAST CANCER
51	ICEAT23214	ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)
52	ICEAT23243	A HOMOGENEOUS ENSEMBLE LEARNING FRAMEWORK FOR IMBALANCED DATA
53	ICEAT23223	A HYBRID METHOD TO DETERMINE WEIGHTS OF CRITERIA
54	ICEAT23124	PREDICTION OF CRIME RATE AND ANALYSIS USING K-NEAREST NEIGHBOUR ALGORITHM
55	ICEAT23212	COMPARISON OF MULTI-VOLTAGE WITH AND WITHOUT SELF-GATING FOR ADVANCED GEOMETRY DESIGN NODES
56	ICEAT23241	MEDICAL DIAGNOSIS USING MACHINE LEARNING A SURVEY
57	ICEAT23261	SEISMIC PERFORMANCE OF HIGH RISE BUILDING WITH NORMAL AND OBLIQUE COLUMN
58	ICEAT23259	FAKE PRODUCT IDENTIFICATION USING BLOCKCHAIN
59	ICEAT23270	MULTIPLE DISEASE PREDICTION AND DIET RECOMMENDATION SYSTEM USING MACHINE LEARNING ALGORITHMS
60	ICEAT23269	DETECTING THE LEAKAGE OF LPG USING GSM MODULE
61	ICEAT23310	A STUDY BASED UPON THE EFFECT OF RECYCLED CONCRETE AGGREGATE, SILICA FUME, GGBS AND MARBLE WASTE ON THE STRENGTH PARAMETERS OF CONCRETE
62	ICEAT23317	TRIBOLOGICAL BEHAVIOR OF JOJOBA OIL DISPERSED WITH ZNO NANOPARTICLES
63	ICEAT23277	PRODUCTION OF INULINASE ENZYME USING SPRING ONION STALK BY SOLID STATE FERMENTATION
64	ICEAT23290	PARSING CHHATTISGARHI SENTENCES USING RULE BASED APPROACH
65	ICEAT23233	DIABETES PREDICTION SYSTEM USING MACHINE LEARNING ALGORITHM WITH WEB APP
66	ICEAT23275	AUTOMATED ACCIDENT DETECTION AND EMERGENCY RESPONSE SYSTEM USING CLOUD COMPUTING
67	ICEAT23341	PERFORMANCE ANALYSIS AND ASSESSMENT OF MACHINE LEARNING ALGORITHMS FOR PREDICTION OF RAINFALL
68	ICEAT23349	LASER HOME SECURITY WITH MOBILE NOTIFICATION
69	ICEAT23324	NATURE INSPIRED ALGORITHMS FOR INTERNET OF THINGS: A COMPREHENSIVE SURVEY
70	ICEAT23330	EFFECT OF INPUT SPEED, AXIAL PLAY & OIL VISCOSITY ON NOISE & TEMPERATURE IN GEARBOX USING DESIGN OF EXPERIMENT
71	ICEAT23348	EFFECTIVE DETECTION ON POSITIVE CASES OF WATER-RELATED ILLNESSES BASED ON AUTOMATED LEARNING



S.NO	PAPER ID	PAPER TITLE
72	ICEAT23274	MACHINE LEARNING ALGORITHMS FOR DIAMOND PRICE PREDICTION
73	ICEAT23354	FIRE INCIDENTS DETECTION USING TELEGRAM BOT
74	ICEAT23343	ENSEMBLE LEARNING BASED SUPERVISED LEARNING APPROACH FOR DESIGNING OF 5G/B5G CLASSIFICATION SYSTEM
75	ICEAT23272	A STUDY ON BAYESIAN NETWORK AND COMPLEXITY IN BRAIN TUMOUR
76	ICEAT23353	EFFECT OF CUTTING PARAMETERS ON MACHINED ROUGHNESS OF HSS T-42 IN PRECISION DRY TURNING
77	ICEAT23273	LITERATURE REVIEW: IMPROVING THE QUALITY OF SERVICES IN CLOUD COMPUTING ENVIRONMENT
78	ICEAT23362	A COMPREHENSIVE REVIEW AND COMPARATIVE ANALYSIS OF THE TFET AND DG-JL-TFET
79	ICEAT23341A	NEW TECHNOLOGIES IN FARMING – A STUDY OF INDIAN START-UPS
80	ICEAT23332	EFFECTS OF VARIOUS TYPES OF STEEL BRACINGS ON RCC STRUCTURE UNDER SEISMIC LOADS
81	ICEAT23332A	EARLY DETECTION OF BREAST CANCER USING DEEP LEARNING ALGORITHMS
82	ICEAT23325	FEATURE EXTRACTION TO DETECT DIABETIC RETINOPATHY FROM RETINAL IMAGES USING DEEP LEARNING
83	ICEAT23257	OVERVIEW OF NETWORK CODING TECHNIQUES AND THEIR APPLICATIONS IN WSN: A COMPREHENSIVE ANALYSIS
84	ICEAT23334	NETWORK INTRUSION DETECTION SYSTEM USING ENSEMBLE METHODS AND DEEP NEURAL NETWORK
85	ICEAT23283	RESEARCHER: A CUSTOMIZED WEB SCRAPER FOR EFFICIENT EXTRACTION OF SCIENTIFIC JOURNAL ARTICLES
86	ICEAT23164	MALWARE DETECTION WITH MACHINE LEARNING USING NCA-BASED FEATURE SELECTION
87	ICEAT23358	AN INTEGRATED BLOCKCHAIN ARCHITECTURE FOR ENHANCING CLOUD SECURITY
88	ICEAT23351	CROP YIELD PREDICTION USING MACHINE LEARNING TECHNIQUES
89	ICEAT23350	PLANT DISEASE DETECTION USING DEEP LEARNING
90	ICEAT23335	A STUDY OF SMART SENSORS FOR HEALTH CARE USING ARTIFICIAL INTELLIGENCE TECHNIQUES
91	ICEAT23346	SPAM MESSAGE DETECTION
92	ICEAT232883	INDOOR NAVIGATION SYSTEM FOR COLLEGE CAMPUS
93	ICEAT23280	ANALYSIS OF BACILLUS THURINGIENSIS BACTERIA USING MULTIFRACTALS
94	ICEAT23297	BICYCLE ENERGY GENERATOR
95	ICEAT23267	A MACHINE LEARNING MODEL FOR ALZHEIMER'S DETECTION
96	ICEAT23364	RESEARCH ON ELECTRONICALLY REGULATED AIR-TO-FUEL AND IGNITION TIMING FOR LIGHT-DUTY GASOLINE ENGINES
97	ICEAT23270A	AUTOMATED ELECTRICITY BILL GENERATION

S.NO	PAPER ID	PAPER TITLE
98	ICEAT23296	FIRE SAFETY OF LITHIUM-ION BATTERIES IN ELECTRIC VEHICLES
99	ICEAT23351A	ALZHEIMER'S DISEASE DIAGNOSIS REGRESSION AND CLASSIFICATION USING 3D BRAIN MR FEATURES FROM NMF-TDNET
100	ICEAT23383	SYNTHESIS GREEN NANOCOMPOSITES : ENGINEERING APPLICATIONS
101	ICEAT23302	AN EFFECTIVE TECHNIQUE FOR STUDENT ATTENDANCE SYSTEM USING FACE RECOGNISATION
102	ICEAT23314	DIAGNOSIS OF GASTRIC CANCER IN ROLE OF ENDOSCOPIC IMAGING TECHNIQUES IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS -AN OVERVIEW
103	ICEAT23318	THYROID PREDICTION USING DATA MINING
104	ICEAT23322	SUSTAINABLE MOBILE BATTERY MANAGEMENT: IOT-INTEGRATED MONITORING AND SOLAR-POWERED BACK COVER SOLUTION
105	ICEAT23339	COMPARATIVE ANALYSIS OF GREEN BUILDING AND CONVENTIONAL BUILDING IN TIME AND RESOURCE MANAGEMENT
106	ICEAT23363	PLANNING, COSTING, AND DELAY MANAGEMENT OF AN APARTMENT BUILDING USING PRIMAVERA AND MSP: A COMPARATIVE STUDY
107	ICEAT23281	USING TRANSFER LEARNING TECHNIQUE FOR INVASIVE SPECIES MONITORING OF HYDRANGEA PLANT
108	ICEAT23331	DETECTION OF PLANT DISEASES IN CHILLI LEAVES USING MACHINE LEARNING
109	ICEAT23345	SELF-TRANSFER ABILITY AND ACCESS TO MANY FUNCTIONALITIES INTERFERENCE ATM
110	ICEAT23284	BLOCKCHAIN INTEGRATING BIM DATA FOR CONSTRUCTION PROJECTS
111	ICEAT23365	EFFECTIVE MODEL OF SMART STICK FOR OBSTACLE
112	ICEAT23345A	A MEDICINAL TEXTILE MATERIAL DEVELOPMENT FOR SKIN AILMENTS HOLDING AYURVEDIC VALUE
113	ICEAT23308	A LITERATURE SURVEY ON MANAGING CULTURAL DIVERSITY AND GOVERNANCE PROCESS IN THE EDUCATION SECTOR
114	ICEAT23350A	APPLICATION OF AI, IOT AND ML FOR BUSINESS TRANSFORMATION OF THE AUTOMOTIVE SECTOR
115	ICEAT23326	THYROID DISEASE DETECTION USING CNN ALGORITHM
116	ICEAT232883A	SMART AGRICULTURE TECHNIQUES
117	ICEAT23285	INTEGRATING 4D-BIM WITH PRIMAVERA SOFTWARE FOR MONITORING METRO RAIL PROJECT
118	ICEAT23282	MODELING, CLASH DETECTION, QUANTIFICATION AND COST ESTIMATION OF METRO RAIL PROJECT USING BIM
119	ICEAT23280A	PROTECTING THE SECRECY OF THE VIDEO USING ADVANCED DATA HIDING
120	ICEAT23356	CNN - PREDICTED DEEP LEARNING MODEL FOR BRAIN TUMOR DIAGNOSIS IN MRI IMAGES
121	ICEAT23409	NETWORK INTRUSION DETECTION SYSTEM USING MACHINE LEARNING

S.NO	PAPER ID	PAPER TITLE
122	ICEAT23362A	STUDY AND DESIGN OF SIMPLE ROUTER WITH H-SCHEDULER USING VCT TECHNIQUE
123	ICEAT23277A	CROP RECOMMENDATION SYSTEM
124	ICEAT23410	ENHANCING SECURE COMMUNICATION IN IOT-BASED AUTOMATED VEHICLE SYSTEMS THROUGH ACCURATE PREDICTION OF ABNORMAL TRAFFIC DATA
125	ICEAT23400	A STUDY ON CUSTOMER PREFERENCE TOWARDS OVER-THE-TOP(OTT) PLATFORMS IN KERALA
126	ICEAT233387	CONSTRUCTION STAGE ANALYSIS OF CABLE STAYED BRIDGE
127	ICEAT23370	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN DRUG DISCOVERY AND DEVELOPMENT
128	ICEAT23331A	DUAL-DIAMETER CARBON NANOTUBE FIELD EFFECT TRANSISTORS SRAM CELL
129	ICEAT23396	INTERIOR NAVIGATION SYSTEM USING ARTIFICIAL INTELLIGENCE
130	ICEAT23361	EVALUATION OF GROUND WATER QUALITY FOR PRE MONSOON VARIATION IN PHYSICO-CHEMICAL PARAMETERS AND HEAVY METALS IN AND AROUND KANCHIPURAM
131	ICEAT23418	THERAPEUTIC EFFICIENCIES OF THE BIOACTIVE POLYPHENOLS FROM TERMINALIA CHEBULA TO TREAT DIABETIC NEPHROPATHY-A COMPUTATIONAL STUDY.
132	ICEAT23392	DAILYFEED - DAILY NEWS APP FOR IOS
133	ICEAT23395	INTELLIGENT AND SECURED CLOUD SERVICE MANAGEMENT USING SMART DATA HASHING ALGORITHM
134	ICEAT23379	RECENT ADVANCEMENTS IN 3-D PRINTING IN MEDICAL APPLICATIONS
135	ICEAT23389	EDGE SUM DIVISOR CORDIAL LABELING OF CROWN GRAPH
136	ICEAT2341921	STUDY OF CRACK WIDTH ASSESSMENT AND PROPAGATION IN RCC & MASONRY STRUCTURES
137	ICEAT2341948	ANALYSIS OF PEBWITH SINGLE AND MULTIPLE GABLES
138	ICEAT23408	DESIGN OF EFFICIENT PIPELINED PARALLEL PREFIX LANDER FISCHER BASED ON CARRY SELECT ADDER
139	ICEAT2341955	PERFORMANCE EVALUATION OF POST TENSIONED SLABS USING EARTHQUAKE TIME HISTORY
140	ICEAT2341957	MACHINE LEARNING METHOD FOR CLASSIFICATION OF ROCKS AND STRUCTURES USING OUTLIER FILTER
141	ICEAT2341927	CAMGUARD: PREVENTING UNAUTHORISED CAMERA ACCESS FOR WOMEN'S SAFETY
142	ICEAT2341932	A STUDY ON THE FINANCIAL LITERACY AMONG THE COLLEGE STUDENTS OF THE KOLLAM DISTRICT OF KERALA
143	ICEAT2341954	EARTHQUAKE ANALYSIS OF ST. ESTEVAM FORT - GOA INCLUDING SOIL STRUCTURE INTERACTION
144	ICEAT2341923	ADVANCING MELANOMA DIAGNOSIS WITH SELF-SUPERVISED NEURAL NETWORKS: EVALUATING THE EFFECTIVENESS OF DIFFERENT TECHNIQUES

S.NO	PAPER ID	PAPER TITLE
145	ICEAT2341947	A COMPARATIVE STUDY OF DATA HIDING TECHNIQUES FOR DIFFERENT IMAGE CATEGORIES
146	ICEAT23415	ADVANCEMENTS IN NANOSTRUCTURED MATERIALS FOR SUSTAINABLE ENERGY HARVESTING AND STORAGE
147	ICEAT23411	COMPARATIVE ANALYSIS OF SENTIMENT ANALYSIS TOOLS
148	ICEAT2341951	DEEP LEARNING-BASED RECOGNITION OF OCULAR DISEASE IN FUNDUS IMAGES.
149	ICEAT2341956	APPLICATION OF INFRARED THERMOGRAPHY TO DETECT DEBONDING OF ASPHALTIC LAYER ON BRIDGE DECK
150	ICEAT23398	IN-SILICO CHARACTERIZATION OF TF IN MOUSE AGEING GENES
151	ICEAT23359	STOCK PRICE PREDICTION USING DIFFERENT TECHNIQUES OF MACHINE LEARNING
152	ICEAT2341941	SEISMIC PERFORMANCE OF G+10 RCC FRAME WITH BASE ISOLATION SYSTEM USING TIME HISTORY ANALYSIS.
153	ICEAT23404	WORK FAMILY CULTURE'S MODERATING EFFECT ON WORK FAMILY CONFLICT & FAMILY FRIENDLY PRACTISES AMONG KERALA NURSES
154	ICEAT2341945	COMPARATIVE ANALYSIS OF MODELLING TOOLS FOR PARABOLIC ARCH TRUSSES: EVALUATING THE SUPERIORITY OF DYNAMO OVER AUTOCAD AND EXCEL
155	ICEAT2341935	DESIGN OF CONTROL SYSTEM FOR 1.7MV TANDETRON ACCELERATOR BY PLC AND SCADA
156	ICEAT2341933	A NOVEL GABOR FILTERING AND ADAPTIVE HISTOGRAM EQUALIZATION METHOD FOR IMPROVING IMAGES
157	ICEAT23242	A STUDY OF SOCIAL NETWORKS: DESIGN, SECURITY AND HUMAN FACTORS
158	ICEAT2341975	DEEP LEARNING BASED OBJECT TRACKING IN FIELD HOCKEY USING FPGA
159	ICEAT2341970	DETECTION OF COPY-MOVE FORGERY USING SIFT AND BEBLID
160	ICEAT2341920	THE MODERATING EFFECT OF GENERAL COMPETENCIES ON CAREER SATISFACTION AND JOB PERFORMANCE: AN EMPIRICAL STUDY ON WEALTH MANAGEMENT FIRMS
161	ICEAT2341969	A REVIEW OF HOW EXCESS RAINFALL AFFECTS THE URBAN SEWERAGE SYSTEM AND PROBLEM SOLVING
162	ICEAT23386	BLOOD BANK MANAGEMENT SYSTEM
163	ICEAT2341952	TO STUDY THE EFFECT OF LATERAL LOADS ON RCC FRAME BUILDING WITH DIFFERENT MASONRY INFILLS BY CONSIDERING MASONRY INFILL AS A EQUIVALENT DIAGONAL STRUT ELEMENT
164	ICEAT2341960	PROGRESSIVE COLLAPSE ANALYSIS OF RC SHEAR WALL BUILDING
165	ICEAT23410A	U-NET ARCHITECTURE FOR THE DETECTION AND CLASSIFICATION OF POLYP IN MEDICAL IMAGES
166	ICEAT2341944	HUMAN MACHINE INTERFACE FOR REALIZING DNA BASED BOOLEAN OPERATIONS AND COMBINATORIAL OPTIMIZATION PROBLEMS
167	ICEAT23419	SECURING BIOMETRIC INFORMATION USING BLOCK CHAIN

S.NO	PAPER ID	PAPER TITLE
168	ICEAT23390	APPLICATION OF MACHINE LEARNING IN CYBER SECURITY ANDROID MALWARE DATA SET
169	ICEAT23391	ARTIFICIAL INTELLIGENCE-BASED HUMAN EMOTION DETECTION USING DEEPFACE
170	ICEAT2341958	PRIORITIZING CRITERIA FOR URBAN QUALITY OF LIFE AND HAPPINESS IN INDIAN CITIES: A SWARA-BASED METHODOLOGY
171	ICEAT2341922	ANALYSIS OF BM3D DENOISING PERFORMANCE WITH DIFFERENT NOISES: A COMPARATIVE STUDY USING MULTIPLE EVALUATION METRICS
172	ICEAT2341973	ASSESSMENT OF HORIZONTALLY CONNECTED HIGH-RISE BUILDINGS UNDER EARTHQUAKE LOADING
173	ICEAT2341964	NON-LINEAR ANALYSIS OF STEEL FIBER REINFORCED PRE-STRESSED CONCRETE T-BEAM
174	ICEAT2341937	QUANTUM MACHINE LEARNING: EXPLORING THE FUNDAMENTALS OF QUANTUM COMPUTERS AND THEIR APPLICATIONS ON SUPPORT VECTOR MACHINES
175	ICEAT2341981	DESIGN AND ANALYSIS OF ENERGY-EFFICIENT RESIDENTIAL BUILDINGS USING BIM
176	ICEAT2341980	ADVANCES AND CHALLENGES IN MULTILINGUAL OCR FOR INDIC SCRIPTS: A COMPREHENSIVE LITERATURE REVIEW
177	ICEAT2341981A	NON NEGATIVE MATRIX FACTORIZATION BASED SINGLE CHANNEL SOURCE SEPERATION
178	ICEAT2341979	INVESTIGATIONS ON MICROSTRUCTURE AND COMPRESSIVE STRENGTH OF ALUMINIUM METAL FOAM
179	ICEAT23388	DATA POISONING ATTACKS ON MACHINE LEARNING MODEL RELIABILITY
180	ICEAT2341939	DESIGN AND IMPLEMENTATION OF AN SPI TO I2C BRIDGE FOR SEAMLESS COMMUNICATION AND INTEROPERABILITY BETWEEN DEVICES
181	ICEAT2341975A	THE EFFECT ON STORY DISPLACEMENT AND STORY SHEAR FOR DIFFERENT ARRANGEMENTS OF SHEAR WALLS
182	ICEAT2341949	ECG & PPG BIO-SIGNALS-BASED AI-BASED STROKE DISEASE PREDICTION SYSTEM
183	ICEAT2341971	SUSPICIOUS ACTIVITY DETECTION AND ALERT SYSTEM
184	ICEAT2341936	DESIGN OF LOW POWER AND MINIMIZED AREA OF ALU USING M-GDI TECHNIQUE AND DECODER
185	ICEAT2341959	PREDICTION OF PARKINSON'S DISEASE A MACHINE LEARNING APPROACH
186	ICEAT23384	IMAGE RECOGNITION USING PRINCIPAL COMPONENT ANALYSIS
187	ICEAT2341982	STUDY ON THE PREPARATION AND PROPERTIES OF NEW GROUTING MATERIAL FOR WALL TIE GROOVE PACKING IN ALUMINIUM FORMWORK SYSTEM BUILDINGS
188	ICEAT2341950	ON ARITHMETICAL TRAITS OF DOUBT FUZZY T-IDEALS BENEATH THE NORMALIZATION OF T-ALGEBRA
189	ICEAT2341961	DESIGN OPTIMIZATION OF CENTRIFUGAL COMPRESSOR IMPELLER FOR 50,000RPM

S.NO	PAPER ID	PAPER TITLE
190	ICEAT2341963	LS DYNA IMPACT MODELLING ON CFRP COMPOSITE AIRCRAFT PANEL WITH VARIOUS IMPACTORS
191	ICEAT2341980A	DESIGN AND IMPLEMENTATION OF 3T BASED XOR/XNOR LOGIC GATE FOR HIGH POWER GAIN AND LESS PROPAGATION DELAY
192	ICEAT2341929	DEVELOPMENT OF A CAREER-GUIDANCE EXPERT SYSTEM
193	ICEAT23416	GENERATING CLOUD MONITORS FROM MODELS TO SECURE CLOUDS
194	ICEAT23329	TIME ORIENT ACCELERATION GAIT PATTERN(TOAGP) BASED FREEZING OF GAIT(FOG) PREDICTION ON PARKINSON PATIENTS USING DEEP LEARNING
195	ICEAT2341981B	AN EFFECTIVE CONTENT BASED IMAGE RETRIEVAL USING DEEP BELIEF NETWORK (DBN)
196	ICEAT23391A	SMART CROP YIELD RECOMMENDATION MODEL IN AGRICULTURE FARM PRODUCTION USING MACHINE LEARNING AND IOT TECHNIQUES

## **1. SWIN TRANSFORMER IN CLASSIFICATION OF IR IMAGES OF PHOTOVOLTAIC MODULE**

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The faults occurring in the photo voltaic module as to be detected in order to increase its efficiency. The infrared images, electroluminescent images, photo luminescent images of photo voltaic module have been used to detect and classify the faults. The infrared data set is used to classify faults and is highly unbalanced. To make it balanced, generative adversarial networks are used to generate images for each fault category. If the fault classification is done using convolution neural network, the feature maps are generated by convolution operation with filters on images. The convolution neural network model is to be trained for 1000 epochs and the time required for training is greater than 24 hours. The computational cost of convolution neural network (CNN) is reduced in transformers through attention mechanism. The Swin transformers that are used for classification as to be trained for 40 epochs and the maximum training time is less than 6 hours. The computation time, categorical classification accuracy, and top-5-accuracy obtained using Swin classifier are compared to the existing methods. It is found that the computational cost is very much reduced by Swin transformer and top-5-accuracy of 99.04% is obtained by it while classifying 11 faults of IR images.

## **2. FUNDAMENTAL STEPS IN DIGITAL IMAGE PROCESSING**

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The digital image processing steps can be categorised into two broad areas as the methods whose input and output are images, and methods whose inputs may be images, but whose outputs are attributes extracted from those images.

Image acquisition is the first process in the digital image processing. Note that acquisition could be as simple as being given an image that is already in digital form. Generally, the image acquisition stage involves pre- processing, such as scaling.

The next step is image enhancement, which is one among the simplest and most appealing areas of digital image processing. Basically, the idea behind enhancement techniques is to bring out detail that is obscured, or simply to highlight certain features of interest in an image. A familiar example of enhancement is when we increase the contrast of an image because “it looks better.” It is important to keep in mind that enhancement is a very subjective area of image processing.

Image restoration is an area that also deals with improving the appearance of an image. However, unlike enhancement, which is subjective, image restoration is objective, in the sense that restoration techniques tend to be based on mathematical or probabilistic models of image degradation. Enhancement, on the other hand, is based on human subjective preferences regarding what constitutes a “good” enhancement result.

Color image processing is an area that has been gaining in importance because of the significant increase in the use of digital images over the Internet. Color image processing involves the study of

fundamental concepts in color models and basic color processing in a digital domain. Image color can be used as the basis for extracting features of interest in an image.

### **3. EFFECT OF RANDOMLY INCLUSION OF ALCCOFINE AND PHOSPHOGYPSUM ON STRENGTH BEHAVIOR OF EXPANSIVE SOIL**

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Generally expansive soils are problematic to civil engineers by the increase and decrease its volume due to movement of water in and out, and the swell-shrink behavior of expansive soils causes extensive problems to the substructure and distress in the infrastructures such as buildings, pavements of breast walls, etc. Understanding the performance of black cotton soil and adopting suitable control measures have been significant work for geotechnical engineers. The present study examines the effectiveness of chemicals used to improve the engineering characteristics of black cotton soil (LL=83.9%, SL=4.28%) collected from a location in Puducherry, India. An experimental program has evaluated the effects of Alccofine-1203 (3, 6, 9, and 12 %) and Phosphogypsum (PG) (0.25, 0.5, 0.75, and 1%) contents on the Index, Strength properties, pH, EC and cation exchange capacity (CEC) characteristics of black cotton soil. Both admixtures were added individually and mixed with the combination of these two admixtures to the untreated soil. The results showed that the combined action of 9% alccofine - 1203 + 0.75% Phosphogypsum (PG) increased the dry density and unconfined compressive strength of soil while decreasing the liquid limit, plasticity index, and swelling properties. However, further increasing the addition of alccofine and Phosphogypsum (PG) results in a decrease in the unconfined compressive strength. Thus, it proves that by adding the admixture, the problematic soil has turned into the best one, with the addition of 9% alccofine and 0.75 percent Phosphogypsum (PG), which exhibited a significant stabilizer on a high swell, high shrink, and low bearing capacity soil thereby it was discovered that by addition of the admixture problematic soil converted to best soil and also reduce the construction cost by making best use of locally available materials.

### **4. ON SOLVING FINGERPRINT CRYPTOGRAPHY USING HEPTAGONAL FUZZY NUMBERS AND CIPHER**

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The fingerprint is a unique pattern developed inside of the hand. It helps to identify a person and secure a lock for personal devices or data. This impression was processed in ways such as verification and identification. Verification is used to verify the two or more fingerprints and identification is used to identify the right human. Cryptography is another data security by using characters, numbers, symbols, etc. In this paper, we merge the cryptography, fingerprint, Delaunay triangulation and Vigenère cipher by using Heptagonal Fuzzy Numbers (HFN).



## **5. A REVIEW ON SPECKLE NOISE REDUCTION TECHNIQUES AND FILTERS**

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Denosing images is essential component of medical image processing for diagnosis. Medical visuals can be highly confusing. Ultrasound is commonly used in medical imaging because it is affordable, poses no risk to human health, has a real-time system, and is compact. Along with its benefit, it has a serious flaw called speckle noise, which impairs the capacity to diagnose. Diffuse sprinkling, which happens while ultrasonic sound waves randomly contact with a small item or particle that is similar in size to a short wavelength, leads to speckle noise. SAR and ultrasound pictures naturally contain speckle noise. Due of its multiplicative nature, speckle noise is extremely challenging to eliminate. Therefore, this work provides an overview of various spatial techniques and transforms, including wavelet domain and spatial domain techniques that have already been suggested for filtering speckle noise in ultrasound pictures. Researchers working on digital image processing face a hurdle when trying to noise fall for satellite photos. There are several methods for noise reduction. In synthetic aperture radar pictures, satellite photos, and other types of imaging, speckle noise is typically present. To offer ideas and advice that is pertinent to the creation of strategies for detection and reduction.

## **6. POTENTIAL AND ACHIEVEMENT OF FLOATING SOLAR PHOTO VOLTAGE IN INDIA**

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India's contributions to the development of alternative energy sources are substantial. India has almost tripled the capacity of its renewable energy installations over the last five to six years, with coastal wind and solar photovoltaic (PV) installations accounting for the vast bulk of this growth. Since land scarcity is a big challenge nowadays, it is an excellent idea to construct solar plants on rivers, lakes, and dams, which are otherwise idle water bodies. The progressive depletion of fossil resources and the ever-increasing need for electricity both pose serious obstacles to progress. The electricity generated by floating solar photovoltaic systems is significant. India has completed a number of large-scale projects, including the 100MW Ramagundam, Telangana project and the NTPC Simhadri Solar Plant. This investigation highlights the potential benefits and challenges of these plants. Feasibility analysis

of 5MW FSPV at Somasila Dam, Andhra Pradesh is also done in this paper. Additional to this, the article gave the economic and technological analysis of floating solar photovoltaics, in addition to discussing several case studies.

## **7. A COMPREHENSIVE REVIEW ON PAPER CUTTING MACHINE USING SOLAR POWER**

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The paper cutting machine using Solar Power is used to cut the papers in equal and accurate dimensions. The main principle of this method is used to reduce the human power and time consumption by eliminating the wastage of the raw materials. The manually handed paper cutting machine which causes improper cutting of the paper. So we made the automatic machine which eliminates this drawback. The main peculiarity of machine is its automatic working, reduced man power, required less time. Paper is one of the majorly used material in our day to day activities in taking information's down necessary information's, it is very important that there is a machine that can handle it at a domestic level to give the desired form for various use. The machine is made up of a motor, an aurdino board, plastic materials, blade, and belt. The machine also uses code which is programmed on the aurdino board which helps to set the length of cut and the slider which holds the blade slides to cut the paper. The machine is tested and the output is evaluated. It is well suited for small scale industries.

## **8. COMPUTING SERVICES FOR AI-BASED SECURITY**

Dr. B Padmaja, Naredla Deepak Reddy, Dr. M Nagaraju, Thota Anjusree, Mr. E Krishna Rao Patro  
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In today's digital age, there are more devices connected than ever before. This means devices are able to communicate with each other in ways that were never possible before. The Internet of Things (IoT) is a term that refers to the networking of everyday objects to make them able to communicate with each other. IoT allows for the communication of data between the devices in two ways: over the network or over the air. Network communication is sending data over a network that is configured to route data to a destination. The network is configured through the use of a router.

## **9. OBJECT ORIENTED DESIGN APPROACH FOR THE IMPLEMENTATION OF SECURE AIRCRAFT MANAGEMENT SYSTEM BASED ON MACHINE LEARNING**

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This paper presents the methodology for the development of a real time application. In this paper, we've proposed a new methodology for aircraft management systems. It has been designed to solve the problem that has been arising in the existing models. The proposed technique will help to enhance the security and shorten the processing time with the help of object-oriented techniques. The main objective of this paper is for the Simulation of the entire design process to be performed using object-oriented techniques and machine learning techniques which helps to divide the components into small objects and to evaluate the system model to achieve best accuracy.

## **10. SOLAR BASED SMART IRRIGATION SYSTEM**

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Renewable energy sources are a viable option for bridging the power industry's continuous supply gap. Solar energy is the most advantageous of all renewable energy resources since it is available worldwide, unlike other geographically limited resources. For this enormous solar system implementation, sophisticated frameworks for remote plant monitoring using a Arduino interface are required. Because most of them are located in difficult places, monitoring them from a single location is impossible. This system measures the voltage, current temperature, and light intensity. The system is implemented using raspberry pi. The data logger system is also implemented in this system. The proposed system is implemented in real-time. The proposed system shows accurate results in real time.

## **11. MOLECULAR DOCKING STUDIES OF B-AMYLOID PROTEIN WITH NATURAL MULTIPLE LIGANDS OF CHRYSAMINE G, CURCUMIN, THIOFLAVIN T AND TRI PHOSPHONIC ACID: A NOVEL TARGET FOR ALZHEIMER'S DISEASE (AD)**

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Alzheimer's disease (AD) is the most widely recognized reason for dementia among more seasoned individuals, and the commonness of this disease is assessed to rise rapidly in the impending years. Shockingly, practically the entirety of the medication up-and-comers tried for AD as of not long ago have neglected to show any viability. From now on, there is an expanded need to turn away and additionally hinder the progression of AD. It is realized that one of the major obsessive qualities of AD is the presence of senile plaques (SPs) in the cerebrum. These SPs are made out of amassed amyloid beta ( $A\beta$ ), obtained from the amyloid precursor protein (APP). Drug organizations have directed various investigations to distinguish protected and compelling enemies of  $A\beta$  medications to battle AD. It is realized that  $\alpha$ -,  $\beta$ -, and  $\gamma$ -secretases are the three proteases that are engaged with APP handling. Moreover, there is a developing interest in these proteases, as they commit the tweak and creation of  $A\beta$ . It has been seen that little mixtures can be utilized to focus on these significant proteases. These mixtures should fulfill the regular exacting prerequisites of a medication applicant focused on mind entrance and selectivity toward various proteases. In this article, we have zeroed in on the different atoms Chrysamine G, Curcumin, Thioflavin T and Tri phosphonic corrosive which are a work in progress for focusing on  $\beta$ -amyloid protein. This current investigation features the design movement relationship and other physicochemical highlights of a few pharmacological applicants Chrysamine G, Curcumin, Thioflavin T and Tri phosphonic corrosive to effectively grow a new enemy of AD drugs.

## **12. EXPERIMENTAL STUDY ON CONCRETE USING GGBS AND STEEL FIBRES**

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This experimental investigation is carried out the EXPERIMENTAL STUDY ON CONCRETE USING GGBS AND FIBERS with ground granulated blast furnace slag (GGBS) and addition of steel fiber. In this investigation M30 grade of concrete is replaced with ground granulated blast furnace slag (0%, 25%, 30%, 35% and 40%) by weight and addition of steel fiber in different percentage (0%, 0.5%, 1%, 1.5% and 2%). Economical and technical analysis of GGBS and steel fiber in concrete has been done. Finally, the strength performance of slag blended fiber reinforced concrete is compared with the performance of conventional concrete.

## **13. FAST LANE FUEL DISPENSER (FLFD)**

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To fill the fuel tank without human interaction, using Radio-Frequency Identification (RFID) Card which is prepaid with a minimum balance. The information such as user and vehicle details, amount paid and the balance in the account will be shared with the user. The proposed system is to set up a

framework to fill the fuel tank from the fuel dispenser. The RFID card reader is used to verify all the details of the user. The system displays the modern-era petrol dispensing system which is intended to be working with a prepaid card. The system can improve the fueling process in order to make it much easier, more secure, and more reliable. It also avoids the black selling of fuels in the absence of a serviceman and reduces the risk of carrying money every time.

#### **14. CNN-BASED CLASSIFICATION PERFORMANCE OF SQL-INJECTION ATTACK: A COMPARATIVE ANALYSIS**

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SQL injection attacks are most likely to utilize structured query language injection technology to reveal personal information and inject keywords into various sorts of websites in order to target specific characters. It's one of the most dangerous security flaws. In today's society, security is extremely vital and necessitates special preventative measures. As the machine learns structured query language injection language features, human intervention is drastically minimized. To prevent SQL injection attacks on unvalidated user-supplied data that isn't explicitly used in the -SQL interrogation. An attacker could take advantage of these flaws to obtain direct access to the database. An attacker has targeted a vulnerable website. Certain websites may be targeted in specific situations. because of the worth of the data and the desire of the hackers to get it. According to statistics, the use of SQL injection on their websites is extremely common. While coding the program, the vulnerability in their application is frequently overlooked because finding flaws in a large code base is tough. To access or modify data, an attacker inserts structured query language code into a web form's input field or HTTP/S request header. A SQL injection flaw could allow an attacker to send commands directly to a web application's underlying database, crippling its functioning. This frequently prompts the question of how to store and manage this information while ensuring its security, availability, and confidentiality. There are various options for doing so. SQL injection can be used in a variety of ways. Bypassing authentication, an attacker might gain access to, alter, and delete data in the database. An attacker may even use SQL injection to run a command on the operating system. An attacker may then begin a more serious attack within the network behind the firewall [1]in this way. There are several SQL injection methods to choose from:

- Error-based SQL injection
- Blind SQL injection
- Boolean-Based Blind SQL injection
- Time-Based Blind SQL injection
- Out-of-band SQL injection

- Union-based SQL injection

Few existing models offer higher accuracy, but detection of SQL injection attacks causes false positives. Injection errors are usually easier to detect when examining source code than when testing. Traditionally, scanners and fuzzers can detect injection errors. However, it will fail, especially for advanced attacks using unknown vectors. Some existing solutions have proven themselves, but they are case-specific and highly accurate.[2]

## **15. A COMPREHENSIVE STUDY ON CLASSICAL HOMOMORPHIC ENCRYPTION ALGORITHMS FOR DATA ENCRYPTION**

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Different homomorphic encryption schemes are emerging as the new boom in the field of cryptography. It enables the user to perform computation on the encrypted text itself. The evolution of the homomorphic encryption scheme has not happened in one night, it took years of hard work by researchers. The paper studies various classical homomorphic encryption algorithms that served as a milestone in the journey of achieving a fully homomorphic encryption scheme. The chronological survey of classical homomorphic encryption is presented. A comparative analysis is done to analyze the homomorphic properties and ciphertext expansion ratio. A clear understanding of various classical homomorphic encryption with their algorithms is done and makes it easy for new researchers to understand the evolution of homomorphic encryption from the very first encryption algorithm, the RSA algorithm. It may help the latest researchers in the field of cryptography, to understand homomorphic encryption in-depth and its evolution.

## **16. ASSESSMENT OF NOISE POLLUTION IN THE CITY OF CHENNAI**

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Noise is an unpleasant sound, a by-product of human activities which are detrimental to the quality of human life. The road traffic noise created by vehicle movements has proven, it is the predominant source of noise pollution in the urban environment. Noise pollution gradually increases day by day, year by year due to urbanization, industrialization and motorization in urban areas. The study aims to discuss in detail by evaluating the parameters and indicators which causes noise pollution and also to assess, analyze the noise descriptors and to prepare noise map in the study area Vadapalani - Arcot Road Signal, Chennai district, Tamilnadu State, India. Noise readings were measured for 30 minutes for each site location. Road traffic noise readings were computed in various days, times, periods, of two major intersections of State highways, arterial roads including 40 different locations along the roads. Assessments have been done by using the sound digital meter and interpreting as a noise mapping using QGIS open software platform. The noise map was computed by using the values of

equivalent energy noise level measured. The study summarizes the present noise level exceeds the prescribed standard limits by Central Pollution Control Board. Finally, the paper will conclude solutions and suggestions as a remedy to control the noise pollution which has to be implemented across the city development. Several measures have to be practiced and awareness to the public to be promoted to provoke them to join hands to improve Chennai city and make it more sustainable and to provide comfortable living to the urban dwellers which has to be free from noise pollution.

## **17. AN EFFICIENT FRAMEWORK FOR SECURING MEDICAL IMAGES USING CHAOTIC HASH SCRAMBLING AND LOGISTIC DIFFUSION**

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Recently, there has been a rapid growth in the utilization of medical images in telemedicine applications. Image encryption is an interesting research topic, especially in medical images. This is due to the importance of security when storing and transmitting digital images. Our main goal is to propose a framework which produces an image encryption and decryption procedure that combines several methods such as chaotic-hash scrambling to perform the confusion process, Henon Map and diffusion with logistic maps to obtain strong encryption against various attacks. The proposed encryption procedure is proven to have resistance to statistical and differential attacks which have been measured by several measuring tools such as histogram analysis, chi-square, entropy, correlation coefficient and avalanche effect. In addition, our proposed framework also generates a unique key for encryption and decryption process using Philox Pseudo Random Generator. Our proposed system can be efficiently applicable in telemedicine applications for securing medical images.

## **18. ANDROID APPLICATION MANAGER TO DEACTIVATE USER APPS**

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Safety of the users information and management of the user security is the most important thing needed in today's android devices. We have developed an application using android studio with kotlin which enables the users to deactivate the apps after the usage of the application to ensure security measures and device performance. This project focus on providing a complete safety to the device by restricting the permissions granted for the application by deactivating the app.

## **19. SALES FORECAST PREDICTION WITH A WEB INTERFACE USING FLASK AND MACHINE LEARNING**

Dr. Dhanakoti V <sup>#1</sup>, Sakthivel S<sup>#2</sup>, Shakir Ahamed M<sup>#3</sup>, Sasitharan M<sup>#4</sup>

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Business intelligence is one of the demanded skills in information technology, as it is the current stipulation. We have developed model where it predicts the future sales pattern of a product by imparting the purchase history between a time period to the model. This project focuses on analyzing and visualizing the regional sales of products. The underlying algorithm is based on the linear regression and the random forest classifier. Segmenting consumer-based buying behavior and applying 80/20 rule to identify top customers/products by applying Xgboost.

## **20. A BAYESIAN ANALYSIS APPROACH FOR BRIDGING THE GAP BETWEEN EMPLOYEE EXPECTATIONS AND EMPLOYEE SATISFACTION**

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Satisfaction of the employees working in an organization is one of the major challenging tasks for any organization. In this research as reported in the title, the Bayesian theorem is applied to find out the combination of possible cases of highly influencing factors that were confirmed using correlation, and the various combinations which will lead to best-case scenarios and worst-case scenarios are found using Bayesian Theorem. The novelty in the article is applying Baye's theorem for the study which was undertaken. Baye's theorem is a mathematical principle based on probability theory where the conditional probability approach is considered to study the likelihood of the outcome of the occurring event based on the previous occurrence.

## **21. THE ANALYSIS, DESIGN AND TESTING OF FOUR-LEGGED SELF-SUPPORTING TRANSMISSION TOWER OF 220KV**

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In every country as the development occurs the need for power supply increases and to satisfy that need of power every country needs to develop its power supply grid and expand the reach of power to every corner of the country. To carry the power in the form of electricity a network of transmission tower line is developed. Hence, need of Transmission towers increases. In this study the design and analysis of transmission tower is performed by using STAAD Pro.CONNECT Edition and for that purpose various loads like Dead Load, Wind load and various other load cases are prepared by calculating the values as per the Terrain and on site conditions faced by the Transmission towers. The 3D model of the transmission tower is created in AutoCAD and that model is imported in STAAD Pro. After applying loading conditions for Wind Load, Dead Load, Longitudinal Loads and Transverse Loads, an analysis is performed and the behavior of the transmission tower is studied for maximum axial stresses and maximum deflection. To get the actual performance of transmission tower the working of test station of transmission tower is taken for understanding the process of actual testing of transmission towers in practical life and to understand the significance of those test.

## **22. FPGA IMPLEMENTATION OF COMBINED CRYPTOGRAPHY AND STEGANOGRAPHY TO ACHIEVE ENHANCED SECURITY**

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In today's emerging world data transfer across internet is very frequent. Security of such data being transferred is really important. There are situations where confidential information has to be transferred and that needs extra security. The technologies and algorithms available to provide security to these data are collectively known as Cryptography. Cryptographic techniques are used for security of data. The 2 main processes of Cryptography are Encryption at sender end and Decryption at receiver end. The process of encrypting the input message to ensure secure transfer is Encryption'. Decryption is the process of getting back the original message from the encrypted message. AES is an acronym for Advanced Encryption Standard. It is the most widely used and highly secure symmetric cryptographic algorithm. The main advantage of AES algorithm is its large key size which definitely contributes to the strength of encryption and thus making the data transfer more secure. The sender as well as receiver uses the single one key for encryption and decryption respectively. Steganography is a technique that helps to provide additional layer of security by hiding one form of data in another form. A text data can be hidden inside an image and transmitted with the help of this technique. Here we are implementing the well known algorithm called AES in Verilog which is used for encrypting and decrypting data and analyse the security provided and to analyse the efficiency or power consumption to see if any improvement can be done. Here we also provide one more layer of protection by combining a technique called Steganography with the AES encryption and decryption.

### **23. ELECTRIC VEHICLE CHARGING STATION FINDER AND SLOT BOOKING SYSTEM**

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In this work, we proposed the design and creation of a Java-based Android Studio application for locating electric vehicle (EV) charging stations. A smartphone app is being created to help EV owners with processes, inform users about the charging stations, and provide navigational assistance. This suggested EV locator app has several features and helps EV users discover nearby charging stations and make travel plans. After a user locates a charging station, they may schedule a time to charge their vehicle there. EV owners may utilise this method to more efficiently plan their journeys. The user merely has to input the source and destination. Based on these two criteria, the technology generates a path that includes every charging station that is situated along the journey.

### **24. EMOTION BASED MUSIC RECOMMENDATION SYSTEM**

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Accessing a wide variety of music is made easier by modern music services. Recommendation algorithms are being used by more and more people to select the ideal song for every given circumstance. Music has a big impact on people since it's regularly used to relax, regulate mood, fight stress and illness, and support both mental and physical activities. Music therapy uses a variety of therapeutic settings and techniques to promote wellbeing. The construction of a customized music recommendation system that is motivated by listener emotions will be discussed in this essay.

A recommendation system is created with the use of machine learning and deep learning techniques with the goal of assisting individuals in choosing music for various life scenarios.

### **25. OBLONG SLANT FOR ENCRYPTION AND DECRYPTION OF COUPLED SCHEME TO UNIQUE ROUTE IN ASSOCIATED GRID**

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A graph is, informally, a collection of nodes connected by a collection of edges. A node in a graph is a location where two or more branches covered. One branch may occasionally be the sole one to

connect to the other node. A branch is a line segment that connects two nodes. Encryption in cryptography is the process of encoding messages so that only authorized parties may decode them to read. Every day, more digital information is being produced and shared online. The quantity a result of the weaknesses in the network and software, the number of security assaults/threats has also increased. The proposed research, a novel algorithm to capture the data encryption and decryption technique by graph theoretical manner using hexadecimal values is proposed. To perform substitution, first-level encryption uses binary values. As the second level of encryption, Hexadecimal dialogue is utilized to achieve permutation. A key is not explicitly used by the algorithm to encrypt the data. Through experimentation, the algorithm has been validated.

## **26. IMPROVED AVERAGE SUBJECTIVE BELL MAN FORD PROCEDURE FOR COUPLED GRID**

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The process of previous algorithms is time-consuming because first, each procedure needs to explore the entire graph and calculate the shortest path from each node. The proposed modified average weight Bell man ford Procedure gives a more efficient minimum path cost than the well known bellman ford and dijkstra's algorithm.

## **27. DETECTION OF CRACKS AND BREAKAGES IN RAILS**

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One of the most popular and cost-effective modes of transportation worldwide is rail travel. To prevent accidents, the structural rigidity of rail lines is crucial. Ineffective human inspectors and pricey inspection vehicles are currently used for analyzing railway track quality. Error detection of rail lines plays a crucial part in railway health monitoring, as early detection of developing defects can

save valuable time, lower maintenance costs, and most importantly, protect lives. Detection of cracks and breakages in rails is a very demanding process and due to the variety of potential failure mechanisms, attaining full automation is still exceedingly difficult. Contrarily, with the development of IOT, content troubleshooting has become a vital part of the intelligent industrial control safety system. In this frame work, Internet of Things technology is used to monitor the status of the rails by transmitting vibrations across steel rails there by measuring the amplitudes of accelerations produced.

## **28. SKIN DISEASE DETECTION USING DEEP LEARNING**

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The Skin diseases are conditions that affect the body's surfaces including skin, hair, nails, and associated glands. They can involve all layers of skin and have numerous divisions such as infection, tumors, or inflammation. In this article we are proposing a method that will detect different kinds of skin diseases using deep learning neural network algorithms and image processing techniques. In the proposed system the images of skin diseases are used as the dataset to train the model to predict the disease. The system can correctly predict the 9 different diseases with an accuracy rate of 92%.

## **29. A COMPREHENSIVE MACHINE LEARNING FRAME WORK FOR SOCIAL MEDIA TEXT ANNOTATION: A CASE STUDY ON TWITTER DATA**

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The advent of social media has brought about a transformation in the way individuals interact and exchange information with one another, and this has had both positive and negative effects on people's ability to empathize. The anonymity of the internet can make people feel less accountable for their words and actions, leading to more aggressive and insensitive behavior. When this behavior is targeted at an individual repeatedly, it can be considered cyber bullying. Since those online recordings often persist on the Internet for quite a long time and are challenging to control, cyber bullying is one of the most detrimental effects of social media and tends to be more diabolical than traditional bullying. In this essay, we'll show you an algorithm for finding online bullies using the social networking site Twitter. To increase their score for bullying, we evaluate tweets to identify their relationship to cyberbullying while taking the context of the tweets into account. Our research suggests a novel approach for identifying cyber bullies within a cyberbullying social network through the use of a centrality measure. Our findings demonstrate that this measure surpasses other existing methods in terms of effectiveness.

## **30. AN EFFECTIVE METHODOLOGY FOR FLOOD PREDICTION SYSTEM USING ENSEMBLE LEARNING**

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Flood is one of those natural hazards that causes a lot of destruction to human lives and properties. In coastal areas floods are frequently caused by tsunamis, a storm surge from a tropical cyclone, heavy rainfall, rapid snow melt. To reduce the heavy damage to people and their properties we should be able to predict the occurrence of floods in advance. So, in order to avoid those problems, we propose a Flood prediction System using Voting classifier. By considering the weather dataset which includes features like temperature and atmospheric pressure. We train the data on these features and develop a web-based application in which we select a state and find the districts that are going to get affected in that state and the intensity of that particular place.

### **31. ESTIMATING SOIL MOISTURE AND PREDICTING THE CROP YIELD USING MACHINE LEARNING APPROACH**

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The level of moisture in soil plays a critical role in agricultural production since it is essential for crop growth. However, traditional methods of measuring soil moisture using synthetic aperture radar (SAR) often encounter difficulties due to the interference caused by surface roughness and vegetation growth. To overcome these limitations, machine learning algorithms offer a promising solution that is not bound by physical constraints and has strong nonlinear fitting capabilities. In this study, we utilized machine learning techniques to estimate soil moisture levels in crops and predict the corresponding crop growth during the growing season. To enhance the accuracy of the SAR feature map, we incorporated polarimetric decomposing factors in addition to the four polarization segments. Machine learning models, namely the Multi-layer Perception (MLP) and neural networks and decision tree, were selected and compared to maximize performance expectations. Our research utilized datasets on crop production and fertilizer to improve the reliability and validity of the results.

### **32. AN INTERFACE AND DASHBOARD FOR FACULTY ATTENDANCE SYSTEM**

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Institutions of higher education (HEIs) are looking for strategies to help students achieve academically. The faculty's regular attendance in their classes is one approach to guarantee their academic success. It is impossible to overestimate the importance of teachers showing up to class [1]. Their attendance in class inspires other students to do the same, and students' attendance in class signifies a knowledge transfer from the teacher to the students and vice versa. It takes a lot of work to maintain track of faculty attendance in a college, with this information, we can manage timetables and assign their classes to other professors. As a result, we suggested a system with an interactive dashboard to represent the information about the absent faculty with the use of visualization approaches in order to overcome this problem [2]. We will receive information about each department's total number of professors absent for a single day, the type of leave requested by the

faculty, and their information in the dashboard. Along with the attendance system, we also portray all of the faculty's data according to their designation, which will aid management in making judgements that

### **33. SECURE ECOMMERCE TRANSACTION WITH TRACEABILITY AND TRANSPARENCY**

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Blockchain technology has the power to transform ecommerce by providing a secure and transparent way for online transactions to take place. A blockchain-based ecommerce website utilizes distributed ledger technology to record and validate transactions, eliminating the need for a central intermediary and increasing security and trust.

This paper presents the design and implementation of an ecommerce system that utilizes smart contracts and a decentralized marketplace to enhance security, trust and transparency in online transactions. The system was developed using the Ethereum blockchain and the Solidity programming language for smart contracts. The system was tested using a set of transactions and the results show that the system is able to execute transactions automatically and securely. Additionally, user testing was conducted to evaluate the user-friendliness and accessibility of the system.

### **34. ANDROID APPLICATION BASED SMART BUS PASS SYSTEM**

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As we all know that technology is growing day by day rapidly so we also need to update ourselves to current trends. With the rapid growth in technology, a frequently used service is also getting updated known as bus ticket generation or bus passes. Currently passengers have to stand in long queues for applying or renewing their bus passes, but by the use this SMART BUS PASS APPLICATION passengers will conveniently apply or renew their bus passes by sitting anywhere and anytime with the help of their mobile phones.

### **35. AUTOMATIC NUMBER PLATE DETECTION SYSTEM**

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Considering the Indian traffic and the conflicts arisen in them made us worry. We now face a lot of challenges with feasible answers. Driving a motorcycle or a two-wheeler without wearing a helmet is banned in India, but we see them daily and as a result of it there is increase in accidents and fatalities. The existing system is mainly based on the CCTV recordings to monitor the traffic violations, forcing the officers in charge to zoom in on the number plate whether the passenger and the rider is wearing a helmet or not. To resolve the issue with high accuracy and performance of the system to a bounded unit.

### **36. RASPBERRY PI WIFI WIRELESS SMART ROBOT CAR FOR LIVE INSPECTION AND TRACKING WITH 4-DOF ROBOTIC ARM AND OPENCV TARGET TRACKING**

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A mechanical robot with the ability to do live inspections is a particular kind of robot created with mechanical systems and sensors for the purpose of inspecting and analyzing the environment. These robots can conduct live inspection duties in real-time because of the variety of sensors, cameras, and other tools they are outfitted with. Moreover, these robots have mechanical arms that enable them to carry out physical activities. By using these robots, inspection and maintenance staff won't have to spend as much time performing repetitive jobs or working in dangerous conditions, which will increase efficiency and safety. Overall, the usage of mechanical robots with live inspection capabilities is spreading in many industries and offers a number of advantages, such as increased accuracy, efficiency, and safety. In this article, OpenCV is utilized for the purpose of object detection. The Raspberry Pi WIFI Wireless Smart Robot Car with 4-DOF Robotic Arm and OpenCV Target Tracking is an advanced technology solution for live inspection and tracking in a range of settings. This project combines the power of Raspberry Pi, a wireless connection, and an OpenCV-based target tracking system to enable remote control and real-time video streaming of the robot car. The 4-DOF robotic arm provides additional functionality, allowing for remote manipulation of objects and inspection of hard-to-reach areas. The OpenCV-based target tracking system provides precise control and tracking of objects in the environment, offering enhanced accuracy and efficiency in performing inspection and tracking tasks. This project abstracts the complexity of wireless communication, robotics, and computer vision, offering an accessible solution for users looking to perform live inspection and tracking tasks in a range of settings. The Raspberry Pi WIFI Wireless Smart Robot Car with 4-DOF Robotic Arm and OpenCV Target Tracking offers the potential for improved efficiency, accuracy, and safety in a range of industries, including manufacturing, security, and exploration.

### **37. DRUG TARGET PREDICTION USING IN SILICO CLINICAL TRIALS**

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Clinical trials are a long, expensive, and tedious process to be ready to release a drug to the public. To overcome this, in silico methods have been introduced. It means that the trials get simulated using artificial intelligence to predict their outcomes rather than performing them on humans and animals, putting aside issues of the unethical nature of human testing. The aim is to predict the potential functions and targets of the drug in biological systems through machine learning models. The system speeds up the drug discovery pipeline and reduces undesirable symptoms and side effects. It is a proposed solution to the hindrance that the pandemic had on medical research due to restrictions, social distance mandates, and willing candidates who are eligible for the trials.

### **38. PREDICTIVE ANALYSIS AND DETECTION OF FRAUDULENT TRANSACTIONS IN CREDIT CARD USING MACHINE LEARNING TECHNIQUES**

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Electronic cash, which is popularly called online payments are experiencing a massive growth in the recent few decades. Credit cards, debit cards, net banking, and other payment methods are used for online transactions. This rose to prominence as a result of the ongoing technological improvements. The usage of these e-payments methods made it more vulnerable to fraud. People are affected by this in a variety of positive and negative ways. Positive effects include quick, simple transactions involving money without the usage of hard cash. The issue we are seeing is the rise in scammers, who steal significant sums of money from customers without their consent. Due to card theft, credit card firms have incurred significant losses. Additionally, this is causing a decline in credit card usage. To solve this problem and ensure safe transactions, it is crucial to find these frauds. The use of cutting-edge technology is the only approach to tackle fraud successfully. Data analytics and data storage capabilities that support Machine learning (ML) and Deep Learning (DL) will help in staying ahead of the fraudsters. These algorithms analyse the transaction data to understand the pattern to stop the future fraudulent activities. Predictive models such as Random Forest, logistic regression, XGBoost,



K-nearest neighbour, AdaBoost, Support vector machine have been used to predict if a transaction is fraudulent or genuine.

### **39. VARICOSE VEINS PATIENT MONITORING AND AUTOMATED TREATMENT**

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Twisted, swollen veins are known as varicose veins. Varicose veins can develop in any superficial vein, but the veins in your legs are the most frequently affected. This is due to the fact that standing and walking upright causes your lower body's veins to become more compressed. Spider veins and varicose veins are both frequent; slight variations are only an aesthetic concern. Self-care techniques or medical procedures performed by your doctor to shut or eliminate veins may be used in treatment. Varicose veins affect 23% of persons in the US. When reticular veins and spider telangiectasia are taken into account, the frequency rises to 85% in women and 80% in males. In this research, we suggested keeping track of varicose patients and automatically administering treatment when necessary.

### **40. IMPLEMENTING SIMULTANEOUS LOCALIZATION AND MAPPING FOR AUTONOMOUS NAVIGATION IN ROS TURTLEBOT3**

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This project presents an autonomous navigation system for a Turtlebot3 robot using the Robot Operating System (ROS). The system leverages the simultaneous localization and mapping (SLAM) algorithm to create a map of an unknown environment and then uses it to plan and execute autonomous navigation. The implementation includes both simulation in Gazebo and deployment on a physical Turtlebot3 robot. The SLAM algorithm used in this project is the gmapping package, which creates a 2D occupancy grid map of the environment using data from the Turtlebot3's laser range finder sensor. The resulting map is then used by the Turtlebot3's navigation stack, which plans and executes trajectories to move the robot autonomously towards a goal.

The simulation in Gazebo was used to test and evaluate the system before deployment on the Turtlebot3 robot. The robot's autonomous navigation performance was tested in various scenarios, including navigating through narrow passages and avoiding obstacles.

The implementation on the physical Turtlebot3 robot involved setting up the hardware and software to communicate with ROS and deploying the SLAM and navigation stack packages. The robot was then able to autonomously navigate towards a goal while avoiding obstacles.

The results of this project demonstrate the feasibility and effectiveness of using ROS and the Turtlebot3 platform for autonomous navigation.

#### **41. AUTOMATIC DETECTION OF NEOVASCULARIZATION AND DAMAGED BLOOD VESSELS FOR THE DIAGNOSIS OF DIABETIC RETINOPATHY FROM DIGITAL FUNDUS IMAGES USING ADVANCED MACHINE-LEARNING TECHNIQUES**

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Diabetic retinopathy is a leading cause of blindness in people with diabetes. Proliferative diabetic retinopathy is characterized by neovascularization of the retina as a result of a severe vascular problem. The automatic detection of such new vessels would be helpful in assessing the severity of diabetic retinopathy, and it is an important element of the screening procedure to identify those who may have the disease. Their diabetic retinopathy necessitates rapid care. The early and precise identification of proliferative diabetic retinopathy is critical for the patient's eyesight protection. Automated techniques for detecting proliferative diabetic retinopathy in digital retinal images should be able to distinguish between normal and pathological vessels. Using a multivariate m-Mediods-based classifier, statistical texture analysis (STA), high order spectrum analysis (HOS), and fractal analysis (FA), we suggested a new method for detecting aberrant blood vessels and evaluating proliferative diabetic retinopathy in this paper. The system extracts the vascular pattern and optic disc, using a multilayered thresholding technique and the Hough transform.

#### **42. A STUDY ON THE STRUCTURAL EQUATION MODEL (SEM) TO ANALYZE THE IMPACT OF HRM PRACTICES ON EMPLOYEE RETENTION WITH THE MEDIATING EFFECT OF JOB SATISFACTION, EMPLOYEE COMMITMENT AND EMPLOYEE RETENTION**

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According to the economic survey of 2002, only 5% of the employees in the 20–24 age range have, according to the second National Commission on Labor (NCL), had any form of formal vocational training (Government of India, 2002). According to the economic survey of 2022 Sector such as IT/BPO imparted skill training in 29.8% of estimated establishments, followed by 22.6% in financial services and 21.1% in education sector's establishments. About a quarter, or 24.3%, of establishments

were found to be imparting ‘on-the-Job’ training, which is higher in the IT/BPO sector (36.1% of establishments) and financial services sector (34.8%), the pre-budget Economic Survey 2022.

#### **43. A COMPREHENSIVE SURVEY OF ANALYSIS OF HEART SOUNDS USING MACHINE LEARNING TECHNIQUES TO DETECT HEART DISEASES**

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An estimated 32 per cent of all global deaths were due to cardiovascular diseases (CVD) in 2019 which is a leading cause of death globally. Of these, three-fourths of the deaths occur in low and middle-income nations. The CVD must be detected early for improving patient outcome. Automated heart sound analysis has been studied for more than a few decades using various Digital Signal Processing (DSP) techniques. Attempts have been made in the last decade to apply Machine Learning (ML) in the healthcare domain to make healthcare more accessible. This paper surveys the significant steps that have been taken to detect the most common heart diseases by the application of the machine learning (ML) and deep learning (DL) techniques to analyse the phonocardiograms over the last few years.

#### **44. A COMPARATIVE STUDY ON FACIAL EXPRESSION RECOGNITION**

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The needs and applications of face expression recognition are included in this study. The method of nonverbal communication between verbal and nonverbal cues is through facial expression. It captures or represents the perspective and mental condition of the individual. Over a 20-year period, a significant scientific effort was made to create human-computer interaction. This essay includes an introduction to the process of recognising facial emotions, its implementation, a comparison of prevalent methods, and the stages of automated face identification systems. The goal of the paper is to recognise faces in any image, extract the facial expression—including the eyes and lips—and classify it into six categories: pleased, scared, angry, disgusted, neutral, and sad. A set of filters and methods are used to skillfully handle the coaching information, which is ultimately characterised by a Grid Search with enhanced Support Vector Machine (SVM) victimisation. The most popular method for interpreting human emotion is facial expression. Positive and negative emotions are two of the many diverse emotions that exist. Four types of commonly used systems exist: face detection, face extraction, face categorization, and face recognition. It is not as easy to identify and extract a person's

emotion with the current system. An overview of the Facial Emotion Recognition (FER) process, techniques, and data sets currently in use. FER has long been regarded as a crucial topic in the fields of computer vision and machine learning. Automated FERs are helpful in the majority of applications, including healthcare, education, criminal investigation, human-robot interaction (HRI), etc.

#### **45. CROP YIELD PREDICTION BASED ON APRIORI ALGORITHM USING ASSOCIATION RULES TO ENHANCE AGRIBUSINESS AND OPTIMIZATION BY INTERNET OF THINGS.**

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In order to predict crop productivity, this study will apply data analytics and machine learning techniques to agricultural data and will construct association rules based on fixed attributes and their correlations and optimization using IoT Technique. Methods: Data on various crops is gathered from numerous nations based on predetermined criteria, including area, production, yield, temperature, and rainfall. On a prepared dataset, the pre-processing processes are conducted to run data analytics and machine learning algorithms. An Apriori algorithm is then used to generate association rules using the processed data. Findings: Using the Apriori technique on a crop dataset that had been created, minimum support and confidence levels and lift and association rules were produced. Among them, 'High Yield Production' was predicted by the outcomes of some linked rules then we optimize by smart farming IoT Devices. Application: The main result of this study is a set of efficient and well-constructed association rules for yield prediction, which will be useful for academics, farmers, and government officials to increase agricultural output.

#### **46. AI-POWERED NEWS WEB APP**

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The prospect of technology-based techniques in accordance with the development, production, and dissemination of news goods along with services, have significantly altered our news industry in recent years. The science fantasy realm of artificial intelligence (AI) has given way to a very real technology that may help society handle a variety of problems, including the difficulties the news business faces. The widespread use of computing has made the many methods that artificial intelligence (AI) may accomplish clear. We examined the news industry's use of AI. According to our research. The journalistic industry has not adequately used other fields. The majority of AI news initiatives rely on funding from big giants like Google. This limits the number of players who can employ AI in the news industry to a small number. By providing examples of how these subfields are developing in journalism, we arrived at certain findings and came up with a course of action for developing this project. Under the scope of this paper, we also discuss various techniques that are utilized to implement speech recognition.

#### **47. RECOMMENDATIONS FOR ENSURING EQUITABLE AND COMPARABLE PARAGRAPHS IN A RESEARCH PAPER**

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Plagiarism is a significant consideration in all areas of research, and is generally considered to be an act of wrongdoing or a violation of official documents or patents. However, in the context of research, it may be appropriate for a researcher to draw on previously published data. It is important to consider whether the researcher's intentions were fair and whether they were aware of any potential plagiarism. Research papers may employ a range of linguistic modifications, such as paraphrasing, summarizing, checking for semantic similarity, and borrowing concepts, but all such modifications must be properly cited. This paper explores how to determine the similarity between paragraphs in potentially suspicious manuscripts and any paragraphs in reference/source manuscripts in scientific research papers. Additionally, this paper provides guidelines and rules for appropriately paraphrasing to avoid plagiarism.

#### **48. DESIGN AND ANALYSIS OF WALLACE TREE BASED MULTIPLIER USING APPROXIMATE ADDERS FOR IMPROVING THE EXECUTION RATE OF ELECTRONIC CIRCUITS**

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The development of very fast digital devices with little power consumption is a key goal for VLSI circuit designers and manufacturers. The multiplier, which is proven to be a more power-hungry component in electronic circuits, is used for the majority of calculation functions. In the end, the shift-and-add approach has been used to do multiplication operations. The development of different adders opened the door for an increase in the multipliers' execution rate. Combinational circuits are frequently used in parallel multiplication algorithms, which lack feedback mechanisms. VHDL was used to construct the circuit, while Xilinx simulations were employed to validate its functionalities. This project uses the KSA and the Modified to enhance WTM. The multiplier circuit takes up around 29% of the total space. It is found that the circuit generated 0.041w of power.

#### **49. PERFORMANCE EVALUATION OF SLOTTED TOOL ELECTRODES IN ELECTRIC DISCHARGE DRILLING OF INCONEL 718**

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Electric discharge machining (EDM) is gaining considerable industrial importance due to its potential of machining difficult to machine materials, such as super alloys, composites, ceramics, etc.

During EDM, poor debris removal may occur under certain conditions, and the flushing becomes ineffective causing excessive arcing and short circuiting in the machining zone, thereby, leading to poor material removal and inferior quality of machined surface. In an effort to improve the flushing of accumulated debris, electrode rotation and shaped tool electrodes, can simply evacuate the debris from the machining zone.

In the present experimental investigation, electrical discharge drilling (EDD), is applied using cylindrical copper electrodes to make hole features on Inconel 718. The different types of tool electrodes used were non-slotted (NS), single-slotted (SS), and double-slotted (DS). The experiments were conducted using Taguchi's L9 (3<sup>4</sup>) OA and results analysed using regression. The experimental results exhibited that among the three types of tool electrodes, the single slotted electrode engendered good debris removal capability.

#### **50. REASONS AND REMEDIAL MEASURES TO REDUCE THE EFFICACY OF BREAST CANCER**

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Getting breast cancer is a challenging task that can be dangerous to health if not detected early. There are many tools and technological advances in diagnosing breast cancer. Mammography has become a popular testing method. However, mammography exposes the patient to radiation and causes

discomfort to the patient. Thermographic tests do not require mechanical contact and are less expensive than mammography, which allows patients to receive more frequent tests. Advances in artificial intelligence technology have allowed a comprehensive neurological network approach to assist physicians in rapid diagnosis [7, 8]. It compares the effect of combining the medical information collected by each patient with the sample.

Although these efforts in the past were aimed at developing a hot model for breast cancer, the majority were academic exercise by imitation. These modeling efforts combined have the following limitations:

1. Lack of clinical data to be measured by model (here, thermography of breast cancer).
2. Lack of actual breast shape (i.e., extra geometry), is unique and varies from person to person.
3. Lack of true definition of the tumor (i.e., size and (x, y, z) and the inner surface of the breast).
4. The use of Pennes' bioheat equation as the dominant, naturally limited and simplified equation.
5. Absence of true internal vasculature and blood vessels (i.e., hemodynamic) information in the breast.

Therefore, the aim of the current study was to determine the hot features of breast cancer by creating a computer-assisted hot (or bioheat) model based on actual clinical data.

## **51. ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)**

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Automation and machine vision technology have seen significant changes in the past years. The requirements for safe, effective, and intelligent driving have also greatly increased. More and more emphasis has been dedicated to the research on sophisticated driver-assistance systems as one of the most significant functions in smart transportation. ADAS is preferable to conventional transportation in terms of ensuring passenger safety, improving path planning, and enhancing driving control, particularly when used in an autopilot mode. ADAS is important in the development of AD technology, according to the SAE levels established for autonomous driving vehicles. So, understanding ADAS systems is crucial for anyone working in the automobile sector (on any profile) or a student who aspires to pursue a career in this field.

## **52. A HOMOGENEOUS ENSEMBLE LEARNING FRAMEWORK FOR IMBALANCED DATA**

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Ensemble learning combines several base models, where a traditional algorithm is used to learn each of them. It aggregates the outputs from a set of different classifiers to correctly classify new data points. Constructing ensemble classifiers is extremely useful for high dimensional and large dataset problems that finding an individual classifier in one step is impossible due to the scale and the complexity of the problem. Bagging is one of the most popular and successful ensemble learning algorithms for improving classification accuracy. This paper proposed an ensemble methods using

automobile data by fusing classifiers such as Radial Basis Function (RBF) and Support Vector Machine (SVM) with bagging and their performances are analyzed in terms of accuracy. A wide range of comparative experiments are conducted for standard dataset of automobile. The proposed bagged ensemble methods provide significant improvement of accuracy compared to individual classifiers and previous works on standard dataset of automobile are exhibited.

### **53. A HYBRID METHOD TO DETERMINE WEIGHTS OF CRITERIA**

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This paper proposes a novel hybrid strategy to determine the weights of criteria for Multi-Criteria Decision Analysis (MCDA) techniques. The proposed strategy takes into account the degree of entropy, relationships among criteria, and loss incurred for not giving higher weightages to less weighted criteria. The MCDA techniques which have been hybridized partially are IDOCRIW, CRITIC and CILOS and this has been applied to a case study on ranking alternatives. The ranking of alternatives has been performed through TOPSIS MCDA technique. In order to verify whether the proposed technique is effective, the ranks as obtained with techniques, ODOCRIW, CRITIC, CILOS have been calculated separately. These obtained ranks have been compared with that as obtained out of the proposed hybrid technique. The high level of positive association indicates that the proposed technique provides consistent ranking with the other three rankings.

### **54. PREDICTION OF CRIME RATE AND ANALYSIS USING K-NEAREST NEIGHBOUR ALGORITHM**

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Crime is an alarming aspect of the society, and it requires some serious attention. In India, crime is increasing day by day because factors such as overpopulation and poverty are making it difficult for the people to earn a decent amount of money to support themselves or their families and people are tending to shift towards earning money in a different fashion, by relying on criminal activities. The intent is to create a prediction model to predict crime at a particular time in different states of India and analyze the criminal data which that is present . For this the help of the machine learning algorithm K-nearest neighbour which has proven to be an efficient one. This prediction model helps us to identify which state is crime free at a particular instance of time and which state has a



probability of crime being occurred. This research will help the police in identifying crime patterns and taking responsibility when required. This will help in taking necessary precautions whenever possible so that the criminal activity will decline. Not only aiming towards helping the police with tracking these criminal activities whenever they can happen but also giving the people information about the prediction of what crimes could happen so that they can take necessary steps to avoid any type of conflicts. To prevent crime from occurring, it is essential to understand the patterns of criminal activity in a certain area.

## **55. COMPARISION OF MULTI-VOLTAGE WITH AND WITHOUT SELF-GATING FOR ADVANCED GEOMETRY DESIGN NODES**

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This paper presents a comparison of two methodologies for power optimization applied to the RISC architecture-based ORCA processor. Our aim is to reduce dynamic and static power consumption in the design using the Synopsys Fusion Compiler tool. The first method involves dividing the circuit into multiple power and voltage domains based on their different performance/ power requirement. Along with it, multi-threshold cell libraries have been included as reference libraries for the tool to make a judicious decision of choosing the appropriate one for physical implementation. The second technique combines this multi-voltage and multi-threshold scheme with clock gating, more specifically self-gating, to check if it provides any improvement in our results.

## **56. MEDICAL DIAGNOSIS USING MACHINE LEARNING A SURVEY**

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The task of Medical diagnosis is a critical task in healthcare, enabling early detection and treatment of diseases, and improving patient outcomes. With the emergence of machine learning, the world has shown growing interest in developing automated systems for medical diagnosis. Machine learning algorithms leverage large datasets to learn patterns and make predictions, which can be applied to various medical conditions.

This abstract presents an outlines the current scenario of how machine learning can be used in medical diagnosis. We discuss the different stages of the diagnostic process including feature extraction, model evaluation, data collection and model training. We highlight the challenges and opportunities

associated with medical diagnosis using machine learning, including issues related to data quality, interpretability, and generalizability.

We review the major applications of machine learning in medical diagnosis, including but not limited to, cancer detection, cardiovascular disease diagnosis, infectious disease prediction, and neurological disorder diagnosis. We discuss the strengths and limitations of different machine learning techniques, such as supervised, unsupervised, and deep learning, and their potential for improving medical diagnosis accuracy, sensitivity, and specificity.

Furthermore, we explore the impact of machine learning on clinical decision-making, patient management, and personalized treatment plans. We highlight the potential benefits of machine learning in improving diagnostic accuracy, reducing healthcare costs, and enhancing patient outcomes. We also discuss the ethical considerations associated with the process of machine learning in medical diagnosis, including issues related with privacy, bias, and explainability.

Finally, we outline future directions and research opportunities that are in the area of machine learning in medical diagnosis, including the need for large, diverse, and high-quality datasets, the development of interpretable and explainable machine learning models, and the integration of machine learning into clinical practice. We conclude by emphasizing the transformative potential of machine learning in medical diagnosis, and the need for interdisciplinary collaborations between healthcare providers, data scientists, and policymakers to use the full potential of the process patient care.

## **57. SEISMIC PERFORMANCE OF HIGH RISE BUILDING WITH NORMAL AND OBLIQUE COLUMN**

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The earthquakes are one of the damaging natural hazards to the building. Many researchers and design engineers trying to increase the lateral load resisting capacity of the building. In this present study the innovative technique is to use the oblique column instead of normal column. Oblique column are columns at an angle to the predefined line. For oblique columns the seismic performance should be studied, to check its adaptability. Hence statement of project is “Seismic Performance of High Rise Building with Oblique Column.” This project is an attempt to study linear seismic behavior of building with oblique and normal column. The analysis is carried out in ETABS software.

## **58. FAKE PRODUCT IDENTIFICATION USING BLOCKCHAIN**

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The global development of products and technologies is always accompanied by threats such as counterfeiting and counterfeiting, which can damage the company's name, the company's revenue and the health of its customers. There are so many products in the circuit. To verify whether a product is genuine or counterfeit. Because counterfeit or counterfeit manufacturers face the biggest problems and huge losses. Blockchain technology can be used to check if a product is counterfeit. Blockchain technology can help solve the problem of product counterfeiting. Blockchain technology is more secure. When a product is stored online, a hash code is created for that product, allowing us to record the sale and current owner of the entire product. This is because chains are created for these commercial transactions. All sales records are stored as blocks on the blockchain. The proposed system uses a supply chain to track the product. The customer can track and get all the information about that product and find out if the item is genuine or counterfeit.

## **59. MULTIPLE DISEASE PREDICTION AND DIET RECOMMENDATION SYSTEM USING MACHINE LEARNING ALGORITHMS**

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In today's world, due to busy schedules and less free time many people have started neglecting their health. Very few people do regular exercise and yoga to keep their body fit and healthy. So, many people are aware of health care mobile applications like, Home Workout without any equipment, Google Fit, etc. But very few people use it daily or frequently. The existing Applications which help us to keep track of parameters like our heart rate, number of steps walked in a day, calories burned, etc. But they still do not predict any of the disease based on these parameters. So, the proposed model is about the idea of a disease (diabetes, and heart) prediction which calculates some parameters on its own and then predicts whether a person has any disease or not, whether they are healthy or not. Here we have compared the machine learning algorithms for improving the accuracy of prediction. When compared to other algorithms, the Random Forest algorithm is the most appropriate for disease prediction. The prediction accuracy of the random forest method was 95%. Apart from predicting disease, the proposed application provides a diet recommendation plan also to the patients according to their health condition. The proposed model may serve as a doctor for early diagnosis, decrease workload, ensure timely treatment, and perhaps save lives.

## **60. DETECTING THE LEAKAGE OF LPG USING GSM MODULE**

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Gas leaks are a major problem in the industrial sector, in the domestic environment, and in gas-powered vehicles such as CNG (compressed natural gas) buses, automobiles, and other vehicles. Establishing a gas leak detection system in sensitive areas is one of the prevention techniques to prevent accidents caused by gas leaks. The system uses a gas sensor to detect liquefied petroleum gas (LPG) leaks and uses Global System for Mobile Communication (GSM) to send an SMS to the person

concerned about the leak. When the concentration of LPG in the air reaches a certain limit, the sensor detects a gas leak and the output of the sensor is low. The gas sensor detects the presence of gas, and the LED and buzzer are operated simultaneously by the microcontroller. The user receives an alert, which includes an SMS sent to the programmed mobile number.

## **61. A STUDY BASED UPON THE EFFECT OF RECYCLED CONCRETE AGGREGATE, SILICA FUME, GGBS AND MARBLE WASTE ON THE STRENGTH PARAMETERS OF CONCRETE**

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In current research work, silica fume, ground granulated blast furnace slag, marble waste powder or recycled concrete aggregate were used in combination with one another to improve the strength aspects of the conventional concrete. So, to achieve this goal, all the materials were collected from local sources and then tested for their physical properties and chemical composition: microsilica and slag cement GGBS combined toward exchanging the ordinary Portland cement. Recycled marble waste powder is a substitute for fine ecological aggregate. The recycled concrete aggregate was utilized as well as a fractional substitution of the natural coarse aggregate. For carrying out the research work, silica fume was used from 0% to 30% at an increment of 10% in each case, and ground granulated blast furnace slag was used at a fixed percentage of 10%. In this paper, researchers used the waste powder marble at two different ratios of 20% and 40%, and recycled concrete aggregate was used at a fixed percentage of 25%. Depending upon the ratio of the materials, there were different tests such as compressive strength, bond strength, modulus of elasticity, and flexural strength test. Compressive strength test results showed the maximum strength at 20% usage of the silica fume, 10% for the ground granulated blast furnace slag, 20% for the marble waste powder and 25% for the recycled concrete aggregate. The split tensile strength and flexural strength test results were quite similar to the compressive strength test results, which show the maximum power at 20% usage of the silica fume and 20% usage of the waste marble powder. Test results concluded that using microsilica and GGBS slag cement, marble squander powder, and reused substantial improves the internal microstructure of the concrete. The overall strength of the concrete improves up to a great extent.

## **62. TRIBOLOGICAL BEHAVIOR OF JOJOBA OIL DISPERSED WITH ZNO NANOPARTICLES**

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Despite being widely utilized for their lubricating qualities, petroleum-based lubricants can cause significant environmental impact due to their composition and life cycle. In recent years, the integration of nanoparticles into bio-lubricant oils has gained significant attention as a promising approach to enhance their anti-wear and extreme-pressure properties. The current experimental investigation examines environmentally friendly nano-lubricants made by dispersing different ZnO nanoparticle concentrations in jojoba oil. The study's goal is to evaluate the viability of a bio-sourced substitute nanolubricant for conventional lubricants, which are becoming increasingly scarce. According to ASTM D4172 test standards, the anti-wear and anti-friction properties of jojoba oil dispersed with ZnO nanoparticles were assessed. At 0.25 weight percent of ZnO nanoparticles dispersed in jojoba oil, the steel balls' average friction coefficient and average wear scar diameter decreased by as much as 33.85% and 41.23%, respectively.

### **63. PRODUCTION OF INULINASE ENZYME USING SPRING ONION STALK BY SOLID STATE FERMENTATION**

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Inulinase is an enzyme that hydrolyzes inulin into fructose. Fructose is an alternative sweetener that is more beneficial than sucrose. This enzyme has gained attention as it finds applications in food and pharmaceutical industries. Fungi are the most preferred sources for inulinase enzyme production by solid-state fermentation (SSF). The present work has been carried out to produce this industrially important enzyme from a previously isolated fungal strain *Nothophoma anigozanthi* using a novel low-cost substrate, spring onion stalk, under SSF. Inulin-containing agricultural residue was chosen as a substrate because it lowers production costs and environmental problems. Spring onion stalk contains inulin, which serves as a substrate for inulinase enzyme production. Fermentation parameters such as the amount of substrate, mineral media volume, inoculum volume, spore count, particle size, and fermentation time were taken into account. The maximum inulinase enzyme activity obtained from spring onion stalk was found to be 0.317 U/gds. The yield of the inulinase enzyme from spring onion stalk can be further increased by optimizing fermentation media and parameters using statistical approaches. Inulinase enzyme can be produced on a large-scale using waste agricultural residues of spring onion stalk by SSF.

### **64. PARSING CHHATTISGARHI SENTENCES USING RULE BASED APPROACH**

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The syntax analysis plays a vital important role, in the parsing of Chhattisgarhi sentences as discussed by (Patterson, 2002). There are lots of challenges in the area of machine translation, syntax analysis is one of them. The grammatical structure of the sentence is checked in this phase. In the parsing phase production rules are validated by the help of Cocke–Younger–Kasami algorithm (CYK) after which parse tree is generated; which is based on production rule. Production rules are developed for the Chhattisgarhi language using sentence analysis. According to (Balabantaray et al., 2013), there is an open-source tool kit named CRF++ that utilizes a machine-learning approach. By training with a large corpus of 69,731 Chhattisgarhi words, the CRF++ tool tags all the previously untagged words. In the final phase, the CYK algorithm, along with the Chhattisgarhi language's production rule, generates a 2D grammar matrix to verify the accuracy of parsing. Ultimately, a parse tree is created using context-free grammar.

## **65. DIABETES PREDICTION SYSTEM USING MACHINE LEARNING WITH WEB APP**

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In medicine, it's important to predict diseases first to help them. Diabetes is one of the most dangerous diseases in the world. In ultramodern culture, sugar and fat take place in our health and cause the threat of diabetes. It is important to understand their symptoms in order to anticipate complaints. Currently, machine learning (ML) algorithms are required for complaint detection. This article presents a model for predicting diabetes using a fusion literacy approach. The abstract model consists of two model classes: the Support Vector Machine (SVM) model and the Artificial Neural Network (ANN) model. This model provides information to determine whether opinions about diabetes are positive or negative. The data used in this study were divided into two as reference data and test data at a rate of 7030. The transformation of this model becomes material in the fuzzy model class, and ultimately the feeling of blur determines whether diabetes is understood or not true or not. Good or bad. The cloud system stores the fusion model for future use. The fusion model predicts whether patients have diabetes, based on real-time clinical data from patients. The proposed machine learning method achieves a prediction accuracy of 92.7%, which is higher than the original published model.

## **66. AUTOMATED ACCIDENT DETECTION AND EMERGENCY RESPONSE SYSTEM USING CLOUD COMPUTING**

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Worldwide, traffic accidents are a leading source of fatalities and serious injuries. The severity of road accidents is largely influenced by the slow reporting of incidents and the ineffective emergency response. This study proposes an Automated Accident Detection and Emergency Response System using Cloud Computing to improve emergency response times and reduce the impact of accidents on the transportation system. The system leverages cloud computing and AI technologies to automatically detect accidents and generate alerts for emergency responders, improving response times and reducing the potential for secondary accidents and traffic congestion.

We compared the performance of the proposed system with existing systems, including traditional reporting, sensor-based detection, and machine learning approaches. The results showed that the proposed system outperformed all other systems in terms of accuracy, precision, recall, and F1-score, indicating its potential to significantly improve emergency response operations.

Successful deployment of the system requires careful planning, implementation, and monitoring, as well as integration with existing transportation and emergency response systems. Training and education of stakeholders, as well as continuous improvement of the system, are also necessary for its successful operation.

## **67. PERFORMANCE ANALYSIS AND ASSESSMENT OF MACHINE LEARNING ALGORITHMS FOR PREDICTION OF RAINFALL**

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Agriculture plays a significant role in the Indian economy. Rainfall is crucial to agriculture, but forecasting it has become a major challenge in recent years. The ability to anticipate rainfall accurately enables farmers to better plan for their crops and take preventative measures. Global warming not only affects people and the environment negatively, but it also hastens climate change. Its climate is warming, and the ocean's level is increasing, which results in floods and the desertification of farmed lands. Unfavourable climate change causes premature and senseless amounts of precipitation. To grasp the necessity of changing the environment and its parameters, such as temperature, moistness, precipitation, and wind speed, which ultimately corresponds to precipitation projection. Rainfall is difficult to forecast because it also depends on your location

## **68. LASER HOME SECURITY WITH MOBILE NOTIFICATION**

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In this paper, we've created a laser home security module that will secure the home from intruders and, if necessary, ping the owner. In our idea, a house is shielded by totally enclosing lasers all around the desired area. If someone tries to enter the house without the owner's permission, a buzzer will start buzzing continually at a loud pitch, and the owner of the house will get a missed call and a notification about the same informing them of the threat. The house will also be entirely ringed by laser light. The technology uses a very small amount of power and is highly effective.

## **69. NATURE INSPIRED ALGORITHMS FOR INTERNET OF THINGS: A COMPREHENSIVE SURVEY**

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The Internet of Things (IoT) is permeating many aspects of our daily lives (AI) with the growth of intelligent services and applications powered by AI. Traditional AI algorithms require centralized data gathering and processing due to the enormous scalability of modern IoT networks and growing data privacy concerns, which may not be feasible in real-world application settings. IoT functioning depends on the Wireless Sensor Networks (WSNs) architecture. Nature-inspired algorithms are emerging as a viable solution to the pressing problems in Wireless Sensor Networks (WSNs), with worry about the limited sensor lifetime. Before any network configuration, it is important to carefully consider how to have the best possible network coverage. Optimal network coverage reduces the amount of redundant data that is sensed and also lowers the restricted energy consumption of battery-powered sensors. This article focuses on nature-inspired optimization algorithms for optimal coverage, data aggregation, energy-efficient clustering and routing, sensor localization, load balancing, fault tolerance, and security in wireless sensor networks (WSNs). We have briefly discussed the classification of optimization techniques as well as the WSN issue domains. The genetic algorithm (GA), differential evolution (DE), ant colony optimization (ACO), particle swarm optimization (PSO), grey wolf optimization (GWO), artificial bee colony (ABC), cuckoo search (CS), firefly algorithm (FA), crow search algorithm (CSA), and lion optimization (LO) are a few of the algorithms that take inspiration from nature.

## **70. EFFECT OF INPUT SPEED, AXIAL PLAY & OIL VISCOSITY ON NOISE & TEMPERATURE IN GEARBOX USING DESIGN OF EXPERIMENT**

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Vibration, Noise and temperature are the most important phenomenon which relates with the performance and efficiency of gearbox. Generation of noise is mainly due to vibration in gearbox. There are several parameters which affect the level of noise and temperature. Among them, Input Speed, Axial Play of input pinion and output shaft and Oil Viscosity are the most significant controllable parameters. In this paper, investigation of parameter effects on the temperature and noise in the gearbox is studied. Also this paper includes the most significant parameter effect the temperature rise and noise in gearbox. For the study full factorial method of design of experiment is used followed by regression analysis to find out significant effected parameter.

## **71. EFFECTIVE DETECTION OF POSITIVE CASES ON WATER-RELATED ILLNESSES BASED ON AUTOMATED LEARNING**

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Biological requirements are met by water in numerous ways. Life is impossible on this world without water. The WHO estimates that many children perish off water-borne infections every day, with underdeveloped and developing countries spotting the highest rates of fatality. Consuming tainted water leads to the spread of illnesses caused by water. This document major goal is to “detects water-borne diseases, their challenges, and proposes solutions to solve the issues affecting this research location.” The primary viruses include viruses, bacteria, parasites, and protozoa. The most prevalent illnesses in these places were found to be cholera, hepatitis A and E, a disease called typhoid fever, bacterial diarrhoea (shigellosis), various dehydration disorders, and plague. In this study, we also looked at the qualities of the inputs that are more important for forecasting and that will aid in the analysis of positive cases of waterborne illness. Age, history, and test results are significant factors in predicting cases of waterborne disease positivity, according to experimental results using the random forest feature selection approach. In final analysis, we came to the conclusion that this fascinating study might assist various medical services in lowering the amount of those who become ill from water.

## **72. MACHINE LEARNING ALGORITHMS FOR DIAMOND PRICE PREDICTION**

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Diamond prices have been exceedingly variable during the last century. In this research, we describe a machine learning-based strategy for predicting diamond prices in order to avoid human error. There is

a lot lower danger of losing the investment with an accuracy of 98% utilizing Random Forest Regression. Linear regression, Lasso regression, Support Vector Regression, and Random Forest are all used in the proposed machine learning-based prediction model. The proposed technique predicts the value most correctly. We've also introduced a Crontab tool to automate the process, which will retrain the model to the most correct value before the diamond market opens.

### **73. FIRE INCIDENTS DETECTION USING TELEGRAM BOT**

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Everyone agrees that the woods are regarded as one of the most rebuking and important catalysts, and that forest fires pose a long-term threat to ecological and social systems. The pre-concealment strategy that provides access to the urgent requirement to observe forest fires with the greatest speed had made the backward fire detection a crucial issue. In this piece, the masterful usage of a distant sensor network has been pursued as a potential clarification to the aim of a forest fire. Numerous sensors are connected to this framework, and the data from the distant transmission is used to support the point of the suggested model. Information from these sensors is sent to the stations on the ground for analysis by a tiny satellite in the framework. The discussion plan is based on data from a wireless sensors reticulation for a previously disclosed forest fire. Numerous components must be interconnected and communicated with one another in order for the fire detection process to be successful.

### **74. ENSEMBLE LEARNING BASED SUPERVISED LEARNING APPROACH FOR DESIGNING OF 5G/B5G CLASSIFICATION SYSTEM**

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The emergence of modern wireless technologies has posed a challenge in front of the network service providers as they need to ensure excellent quality of service as well as seamless experience to its users. The focus on quality of user experience has increased with the introduction of the 5G technology. The Service Classification needs to be done using various parameters which includes several performance Indicators as well as quality indicators. Machine Learning techniques have become a powerful tool in variety of real time applications, for this project we have employed Ensemble learning based supervised learning approach to understand the feasibility of 5g service classification using ensemble learning. Use of separate machine learning algorithms has provided encouraging results but an ensemble learning approach using voting classifier provided us with use of various algorithms to provide us an efficiency of about 96%.

## **75. A STUDY ON BAYESIAN NETWORK AND COMPLEXITY IN BRAIN TUMOUR**

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The intent is to determine the Bayesian Network and Brain tumor model of networks that is relatively identical to each other. Bayesian Network in the field of Artificial Intelligence is attained from Bayesian statistics, which has Bayes theorem as its initial layer. It is the superlative event that arises and divines the probability that one of the numerous conceivable known origins was the causative factor. The acyclic graph is instituted by using these networks and denoted by this network with a membership function. Tumors in the brain can spread around the cells formed by a network says that complexity of Fractals and these network cells are known as Bayesian networks in brain tumors. The growth of the Brain tumor is recognized by complexity and that can be analyzed.

## **76. EFFECT OF CUTTING PARAMETERS ON MACHINED ROUGHNESS OF HSS T-42 IN PRECISION DRY TURNING**

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For machining, HSS T-42 is a tough material that is challenging to cut. It is specifically used to create coining dies with well machined surfaces. By choosing the appropriate input parameters and their settings, a CNC precision dry turning process is employed to preserve accurate, high-quality surfaces on HSS T-42. Thus, determining these cutting parameters for HSS T-42 machining is a difficult task. Present paper focuses the effect of cutting input parameters on machined surface roughness of HSS T-42 using a CNC precision dry turning. The experiments were conducted according to Taguchi L9 design. The cutting parameters chosen for turning are feed rate, spindle speed, depth of cut and tool nose radius. However, it is observed that spindle speed is statistically significant and having dominating effect on machined roughness of HSS T-42. Also, tool nose radius is having secondary

effect on roughness. Minimum and maximum roughness values obtained as 37  $\mu\text{m}$  and 78  $\mu\text{m}$  respectively.

## **77. LITERATURE REVIEW: IMPROVING THE QUALITY OF SERVICES IN CLOUD COMPUTING ENVIRONMENT**

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Cloud computing has become a prominent method for delivering data and IT services, where users can access resources over the internet. It introduces a pay-per-use model for computing services, which has led to an increased demand for cloud computing services. As companies transition to the cloud for their services, cloud providers must ensure that their offerings meet the expected quality requirements. Managing the quality of services (QoS) in cloud computing is a critical task, involving the allocation of resources to applications to ensure performance, availability, and reliability. The purpose of this paper is to provide a comprehensive survey on QoS in cloud computing, covering the techniques used as well as their advantages and disadvantages. The survey incorporates all relevant previous works on QoS in the cloud computing environment. By studying these previous works, the paper aims to offer insights into the various QoS methods employed in cloud computing. The survey likely explores a range of QoS techniques that have been employed in the context of cloud computing. These techniques may include resource allocation algorithms, load balancing strategies, fault tolerance mechanisms, performance monitoring, and optimization approaches, and more. Each technique will have its own advantages and disadvantages, which the paper aims to discuss in detail. By conducting this survey, the authors intend to provide a comprehensive overview of the existing QoS methods in cloud computing. This can serve as a valuable resource for researchers, practitioners, and decision-makers who are interested in understanding and implementing QoS mechanisms in the cloud.

## **78. A COMPREHENSIVE REVIEW AND COMPARATIVE ANALYSIS OF THE TFET AND DG-JL-TFET**

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Tunnel Field-Effect Transistors (TFETs) have gained significant attention in the recent years due to their potential for low power consumption and high switching speed. However, their performance is limited by the low on-current caused by the low tunnelling probability of carriers. Double Gate Junctionless TFETs (DG- JLTfETs) have been proposed as an alternative, offering better

performance than conventional TFETs. This comparative review evaluates and compares the performance of TFETs and DG-JLTFETs in terms of on-current, subthreshold slope, and transconductance. The review finds that DG-JLTFETs have a higher on-current, smaller subthreshold slope, and better transconductance compared to conventional TFETs. However, the fabrication process of DG-JLTFETs is more complex than that of conventional TFETs, which may limit their practical implementation. Overall, while both TFETs and DG-JLTFETs have their advantages and disadvantages, DG-JLTFETs show promises a potential alternative to conventional TFETs for future low-power electronic devices.

## **79. NEW TECHNOLOGIES IN FARMING – A STUDY OF INDIAN START-UPS**

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This is a framework for adopting technology in farming, based on secondary study of various services offered by Indian agri-tech companies mostly start-ups. Technology through effective use of mobile phones, cameras, aerial sensors, drones, data science, machine learning and artificial intelligence, should enable three specific actions in order to overcome the disadvantage due to small farm sizes - (i) war on wasteful expenses (ii) maximizing yield by adopting new methods, and (iii) discovering remunerative prices for the output. These actions are divided into eleven best practices illustrated by products that are easier to adopt. This framework of technology prototypes can serve as a reference document for Indian farmers when they choose technologies suitable for their farm, for service providers to provide solutions to these farmers, and for policy makers and financial institutions to create the eco-system needed for all participants to reduce costs and increase farm income.

## **80. EFFECTS OF VARIOUS TYPES OF STEEL BRACINGS ON RCC STRUCTURE UNDER SEISMIC LOADS**

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One of the most dangerous, environmentally harmful, damaging, and life-threatening natural occurrences that produces ground shaking is an earthquake. We must herefore construct the buildings to resist these earthquakes, which may occur at least once over the life of the structure, in order to prevent damage to the structures. In order to increase the stiffness and strength of structures, lateral load resisting systems are added to the frames. Elements that can withstand lateral loads are bracing, shear walls, dampers, etc. In the current work, Response spectrum analysis is used to examine a G+10 RCC building with different types of bracing, including V, chevron, diagonal and X bracing. The bracing is provided for corner bays of peripheral columns of structure. The modelling and analysis of

the structure is done by using ETABS software in accordance with IS: 1893 (Part1):2016. In this work, story displacement and story drift of 5 braced building models are examined and compared with bare frame model. It is found that after using of steel bracing in building its stiffness increases.

## **81. EARLY DETECTION OF BREAST CANCER USING DEEP LEARNING ALGORITHMS**

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This investigation into breast cancer diagnosis from mammography pictures uses deep learning algorithms MobileNetV2 and VGG. This research used a publicly accessible dataset of mammograms to train classification algorithms to distinguish between cancerous and noncancerous tissue. Both algorithms efficacy was measured by a variety of criteria, including accuracy, precision, recall, and F1 score. High levels of accuracy in breast cancer diagnosis were reached by both MobileNetV2 and VGG, with VGG marginally beating MobileNetV2. This work adds to the growing body of evidence that deep learning algorithms may be useful for enhancing the accuracy and efficiency of breast cancer diagnosis using mammography pictures.

## **82. FEATURE EXTRACTION TO DETECT DIABETIC RETINOPATHY FROM RETINAL IMAGES USING DEEP LEARNING**

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In diabetics, a condition known as diabetic retinopathy (DR) damages the retina and over time may result in blindness. Ophthalmologists are now manually evaluating DR, which is a labor- intensive process. Furthermore, this work (project), which is a subset of artificial intelligence (AI), will now focus on studying distinct DR stages. To identify the DR stage and categorize the 3662 training photos into high resolution fundus images, we trained a network called CNN on a sizable dataset. The APTOS dataset that we are using is hosted by Kaggle. Five DR phases are available: zero, 1, 2, 3, and four. The enter parameters for this task are patient-provided fundus eye picture.

## **83. OVERVIEW OF NETWORK CODING TECHNIQUES AND THEIR APPLICATIONS IN WSN: A COMPREHENSIVE ANALYSIS**

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Network coding has emerged as a powerful paradigm in modern communication networks, revolutionizing the way information is transmitted, stored, and processed. This paper provides a comprehensive overview of network coding techniques and their applications in Wireless Sensor Network(WSN). Paper explores the fundamental concepts of network coding and its various forms, including random linear network coding, deterministic network coding, fountain coding, and sparse network coding. Furthermore, we delve into the applications of network coding in Wireless Sensor Network. This paper also highlights the advantages, challenges, and future directions of network coding, aiming to provide researchers, practitioners, and network engineers with valuable insights into the potential of this transformativetechnology.

#### **84. NETWORK INTRUSION DETECTION SYSTEM USING ENSEMBLE METHODS AND DEEP NEURAL NETWORK**

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Today , we find almost everybody using internet and with increase in demand of computer networking , Hackers are taking advantage of this situation and trying to intrude into the networks and disturb the networks thus by injecting malwares into it . It is very important to identify whether the network is free from malware or not in order to ensure secrecy of valuable data. Intrusion Detection Systems (IDS) are some of the most prominent technologies for administrating and looking after security issues in the network. With rapidly changing network traffic data, one classifier is not enough to fend off modern network intruders. In this work, ensemble classifiers are used to classify data based on binary and multiclass. We took this as a major challenge to increase accuracy rates of detection for individual attack types and all types of attacks. This allows us to identify attacks and specific attack categories. We've chosen to contrast other works by opting for Artificial Networks as well. Python being the most versatile programming language in recent times, we chose IDS-ML an open source code repository in order to develop IDS from public network traffic records that can protect modern networks with high efficiency and accuracy.

#### **85. RESEARCHER: A CUSTOMIZED WEB SCRAPER FOR EFFICIENT EXTRACTION OF SCIENTIFIC JOURNAL ARTICLES**

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Searching for scientific articles across multiple journals and digital libraries can be a time-consuming task. This paper presents a customized web scraper called Researcher that can extract content from scientific journal websites and organize them into a single query. The proposed technique aims to provide a single search interface for accessing all the relevant information in a specific field, making the process of analyzing publications more efficient. This paper outlines the development process, system design, and technologies used in the implementation phase of the Researcher. The scraper is designed to be user-friendly, offering an easy-to-use interface that can help researchers find and analyze relevant research papers. The proposed scraper uses various web scraping techniques such as HTML parsing and web crawling to collect data from the scientific journal websites. The proposed scraper can be a valuable tool for researchers looking for relevant articles in specific fields.

## **86. MALWARE DETECTION WITH MACHINE LEARNING USING NCA-BASED FEATURE SELECTION**

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Memory analysis is important in detecting malware as it can hide various features. Malware is a focal point in the field of cybersecurity. In this study, Neighborhood Component Analysis (NCA)-based feature selection algorithm was used by making use of the features hidden by memory analysis and the detection of malware was made with machine learning. The results were flyspecked with different performance parameters and 99.9 % accuracy rate was obtained with Fine Gaussian SVM.

## **87. AN INTEGRATED BLOCKCHAIN ARCHITECTURE FOR ENHANCING CLOUD SECURITY**

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Cyberattacks can target cloud services due to their ubiquitous availability. Because of the way that cloud computing is as yet another innovation, there is a huge gamble that delicate information could be modified during transport. Thus, agitators might acquire a benefit by adjusting information. Clients that use the cloud for various purposes need to realize that their information is reliable and safe. Conversely, blockchain is a permanent advanced record that might be utilized related to distributed computing to offer a changeless cloud-based information capacity and handling framework. In this paper, we depict a strategy for guaranteeing the security of information scrambled utilizing any homomorphic encryption calculation that consolidates blockchain innovation with distributed computing. The proposed strategy makes use of a dispersed network of processing CSPs that are selected based on client demands to avoid the CSP having ultimate control over the data. Each CSP teams up to produce a solitary, predictable hash as an incentive for use in their normal data set. To guarantee the age of permanent information, the Bitcoin and Ethereum blockchain networks keep up with track of expert hash values.

## **88. CROP YIELD PREDICTION USING MACHINE LEARNING TECHNIQUES**

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Future generations growing appetites are being driven by a growing population. Our nation's economy has benefited greatly from the field of agriculture. The development of civilization was facilitated by agriculture. India is an agricultural nation, and crop productivity is a major component of its economy. So, we may argue that our country's economy can be supported by agriculture.

Planning an agriculture program must carefully consider each crop. Crops will be chosen based on a variety of factors, including government policies, market price, and production rate. For our Indian economy to improve, a lot of improvements in the agricultural sector are needed. We can improve agriculture by using machine learning techniques that are easy to apply in the farming sector. The idea behind this proposal is to put into practice the crop prediction and recommendation method so that it can assist in resolving issues facing farmers and agriculture. By increasing the crop output yield rate, this strengthens the states economy.

## **89. PLANT DISEASE DETECTION USING DEEP LEARNING**

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Finding plant diseases is a difficult task in the agricultural industry. An early detection method might be developed with a faster and more accurate forecast of plant diseases in crops, greatly lowering economic losses. As a result, farmers may readily spot unhealthy plants using the suggested approach, increasing their profit margin and producing higher-quality harvests. Food security is seriously threatened by plant diseases. Convolutional Neural Networks (CNN), one of the most recent developments in Deep Learning techniques, have greatly aided researchers in improving the performance and accuracy of object detection and recognition systems, which are used in the proposed method to aid in the automatic detection of Plant diseases.

## **90. A STUDY OF SMART SENSORS FOR HEALTH CARE USING ARTIFICIAL INTELLIGENCE TECHNIQUES**

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Healthcare analysis of data is growing as one of the most interesting research areas in recent decades. Sensor data is collected by a variety of wearable and smart devices. Processing this initial data manually is really difficult. The use of machine learning has evolved into an important data processing technique. To more precisely predict the results of healthcare data, artificial intelligence (AI) employs a number of statistical approaches as well as intricate algorithms. The application of ML algorithms for examining different kinds of healthcare information is then discussed in this study. The goal of this effort is to assist researchers in gaining a thorough grasp of automated learning and its use in health centers. We proposed a classification of machine learning-based systems in healthcare

in this research. We expect that this review paper will help experts become acquainted with the most recent research on ML applications in medicine, identify obstacles in this field, and focus on deep learning approaches in the future because they are extremely powerful tools for addressing healthcare concerns.

## **91. SPAM MESSAGE DETECTION**

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SMS spam has dramatically increased as a result of the rise in mobile phone users. Although mobile messaging channels are now viewed as "clean" and reliable in the majority of the world, recent reports have shown unequivocally that the amount of mobile phone spam is significantly rising year after year. SMS spam filtering is a relatively new task to address this issue. Several issues and easy remedies carried over from email spam screening. It does, however, provide some of its own concerns and issues. By including Indian communications in the globally accessible SMS dataset, this publication motivates researchers to take on the challenge of classifying mobile messages as spam or junk mail for Indian users. Using a sizable corpus of SMS messages for Indians, the article analyzes various machine learning classifiers. In this paper, we are comparing the accuracy of dataset using LSTM and methods in Spam detection of messages.

## **92. INDOOR NAVIGATION SYSTEM**

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Indoor navigation systems are becoming increasingly popular in busy public spaces like airports and shopping centres. However, similar infrastructure is also required in educational institutions, especially universities. A college-specific indoor navigation system will be developed in this project using Python Flask and a user-supplied CSV dataset. Users will be able to navigate the campus with the help of an interactive map. We'll construct the map using the CSV data you provided. It will detail the locations and layouts of the various indoor facilities on campus. Users will be able to conduct location-based searches and receive turn-by-turn directions to their desired destinations. The system will be developed using the Python Flask framework, and SQLite will serve as the underlying database. HTML, CSS, and JavaScript will be used to create the map interface, and the Leaflet.js library will be used to create the interactive map. College students, professors, and staff will all benefit greatly from the systems ease of use and improved accessibility throughout campus.

### **93. ANALYSIS OF BACILLUS THURINGIENSIS BACTERIA USING MULTIFRACTALS**

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This inspects disclose the statistical skills and mathematical aspects in contemplation of explicating the complexity in Bacillus Thuringiensis in two dissimilar growth stages. The variation of intensity and texture complexity of bacterial cell images are calculated by fractal dimension methods. Box Counting Method (DB) software is casted – off to figure out the dimension of the cells. The steady state growth of bacteria is scrutinized by least square method for the purpose of determining the Fractal capacity dimension (ks). The dimension value of cell changes as the cluster mass M increases which is examined by Multifractals Method.

### **94. BICYCLE ENERGY GENERATOR**

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In modern times, people in remote areas often face immense difficulty due to power cuts, erratic power supply, and a general shortage of electricity. This problem is further amplified by the fact that the vast majority of the electricity we consume is generated by burning increasingly rare and pollution causing fossil fuels in thermal power plants. To overcome both these problems, we have devised a method of using bicycle pedalling to generate electricity in a safe, clean and renewable way. This

project comes in two models: stationery and dynamic. The stationery model generates electricity that can be consumed by 3rd party appliances, while the moving model creates electricity that is to be used by appliances on the cycle itself, like flashlights, phone chargers etc.

## **95. A MACHINE LEARNING MODEL FOR ALZHEIMER'S DETECTION**

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A neurological condition that worsens over time and causes memory loss and cognitive impairment is called Alzheimer's disease (AD). The ability to detect AD early and accurately is essential for effective management and intervention. The creation of prediction models using cutting-edge data analytics methods has drawn a lot of interest in the field of AD research in recent years. The literature on predictive models for AD diagnosis is reviewed in-depth in this work. With the use of extensive datasets obtained from numerous sources, such as genetic data, medical imaging, clinical records, and lifestyle factors, our methodology utilizes the power of machine learning algorithms. In this work we evaluate how the machine learning approaches perform on the MRI related data which is given by (OASIS) dataset. The dataset comprises longitudinal MRI data collected from 150 individuals ranging in age from 60 to 96 years. Isolation forest, Xgboost has been used in our model.

## **96. RESEARCH ON ELECTRONICALLY REGULATED AIR-TO- FUEL AND IGNITION TIMING FOR LIGHT-DUTY**

Gasoline Engines  
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Right now, commercially available ignition systems include both electronic ignition and carburetor setups. The method would optimise the performance of the engine by adjusting the ratio of air to fuel and the timing of the ignition according to the conditions at the time. Based on our analysis of the available experimental data, we came to the conclusion that the use of electronic control of the engine led to a 10% rise in the specific fuel consumption while simultaneously leading to a 90% improvement in the exhaust emission performance.

## **97. AUTOMATED ELECTRICITY BILL GENERATION**

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The concept proposed here is very useful for state electricity department by which the power consumption data along with tariff data will be sent to the concern authorized mobile phone that belongs to the bill raising person who belongs to the department. The same system is also very useful for energy consumer by which he/she will have vigilance over their energy consumption and accordingly they can plan to reduce the billing/tariff rate. To prove the concept practically, we need one electronic energy meter and its out generates pulses according to the load connected to it. Since the meter generates analog pulses and whereas the controller used here will not accept these analog pulses, these must be converted in to digital. The digital pulses produced by the circuit are fed to the 89C52 microcontroller chip. Now this chip is programmed to count and display the pulses in one row and accordingly tariff rate also will be displayed in another row. The display section is designed with LCD and it is interfaced with controller chip through its output port. With the help of a GSM module interfaced with same controller, the data will be transmitted to the concern mobile phone number must be stored in to the processor. Since the data will be transmitted continuously, the concern person can raise the bill when required. Raising the bill and uploading the data in to server is the job of department and it is not in our control. The duty of consumer energy meter is to send the tariff data so that the person who is visiting each and every home to take meter reading can be avoided. The energy meter used here is designed to generate 1600 pulses per unit consumption which takes long time to complete the demo in less time. Therefore each pulse produced by the energy meter is treated as 1 unit consumption and accordingly tariff rate is also programmed such that for 10 pulses treated as 10 units and RS; 1/- per unit. Above ten pulses and up to 20 pulses, tariff rate fixed as RS; 2/-, similarly for above 30 pulses tariff rate is fixed as Rs; 3/- per unit. Accordingly the controller chip is programmed to read and display the energy consumption. Similarly tariff rate will be calculated internally, displayed and transmitted through GSM module.

## **98. FIRE SAFETY OF LITHIUM-ION BATTERIES IN ELECTRIC VEHICLES**

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The safety of lithium-ion batteries in vehicles is a priority of the automotive industry. The focus of the development activities are the reduction of the risks and the improvement of the safety concepts and systems. A brief summary of the current state of lithium-ion battery technology at the cell and battery levels will be provided, with emphasis on safety features, dangers, statistical relevance, and recent occurrences or accidents. There will be a summary of hazardous incidents involving lithium-ion batteries for automobiles this summary will only include information that is openly available. On the basis of this information, a statistical significance that takes into account both the present situation and the anticipated future will be displayed. As a result, there are not as many electric and hybrid vehicles available on the market, which reduces the overall number of safety-relevant events. Also low is the risk in its entirety. Each electric or hybrid vehicle carries a substantially higher risk of safety-related mishaps. In the end, it depends on the trigger employed. An excellent overview can be obtained by employing a bottom-up safety assessment method that identifies the hazards and risks associated with the usage of each cell, module, and battery in vehicles and describes the estimated risks associated with each of these components. Additionally, a review of these other pertinent safety measures will be provided. The fundamental conclusion of this research is that a lithium-ion battery's safety level mostly depends on the cell chemistry and its capacity. Although the introduction of chemicals may increase safety, it will also reduce capacity and performance and increase costs. Other extra features won't affect battery safety in any way. This makes it possible to establish specifications for the package, collision behaviour, and functional safety of cars. We will demonstrate and talk about the principles and qualities that make up the present level of electric and hybrid car safety. Finally, information regarding new developments in lithium battery technology will be provided, along with details about pertinent safety features.

## **99. ALZHEIMERS DISEASE DIAGNOSIS REGRESSION AND CLASSIFICATION USING 3D BRAIN MR FEATURES FROM NMF-TDNET**

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A number of researchers are using convolutional neural networks to isolate deep level features from clinical images in order to better understand them. Definitely group people with Alzheimer's disease and conjecture clinical results as deep learning and clinical imaging technology have advanced. The basic component analysis network (PCANet), a tiny Deep Learning network, leverages principal component analysis to make mega-facet channel financial institutions evaluate trial learning. After binarization, block wise histograms are worked towards get picture ascribes. Since some multi-facet channel banks are created using test data, PCANet highlights with tens, hundreds, or even thousands of aspects are the result, making it less flexible. To address these issues, we will introduce the PCANet-dependent information-free NMF-TDNet signifies nonnegative matrix factorization tensor decomposition network. Nonnegative matrix factorisation is applied. towards make staggered channel banks considering test advancing rather about PCA. From that point onward, In order to create a higher-request tensor and create the final picture highlights, we apply results-growing experience and tensor decomposition (TD). In our technique, support vector machine (SVM) involves these qualities as contribution towards recognize promotion, anticipate it's clinical score and group it.

## **100. SYNTHESIS GREEN NANOCOMPOSITES : ENGINEERING APPLICATIONS**

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Novel functionalized nanoparticles (NPs) have attracted much attention in catalysis, sensing, and electronics, as a result of their ultrahigh activity for surface reactions. For reliable employment of M-NPs in various applications, green synthetic methods for the erection of aggregated functional M-NCs with diameters less than a few nanometers are needed. The M-NCs will be prepared by green methods such as hydrothermal and phytochemical. The nanocomposites will be characterized with different spectroscopic and microscopic techniques such as FTIR, BET, TG- DTA, UV-Visible, TEM, EDAX, Scanning electron microscopy (SEM) and X-ray diffraction analysis. The size and growth rate of the trimetallic nanocomposites can be changed by capping agent, and those composite shapes are found based on selected area electron diffraction (SAED) and transmission electron microscope (TEM) data. Effectual produced MNCs have a high aptitude for stability and sensitivity to gas sensors and other applications. Herein, other author's present functional assemblies of ultra-small capped and reduced M-NCs produced within high stability and sensitivity. Meticulously, M-NCs can be readily generated with precision dimensional control down to 1 nm. These NPs with porous polymers display superior hydrogen (H<sub>2</sub>) sensing properties at room temperature in air. By following green methodologies, we are expecting to produce highly efficient sustainable and eco-friendly sensors for hydrogen, chemical, optical and electrical sensors. Compared with traditional methods, noble nanoparticle-based colorimetry possesses high sensitivity, and it does not need expensive equipment, and are simple.

## **101. AN EFFECTIVE TECHNIQUE FOR STUDENT ATTENDANCE SYSTEM USING FACE RECOGNISATION**

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In this article, we suggest a face-scanning system for controlling student attendance in educational facilities. The suggested system employs deep learning techniques to recognize students' faces with accuracy and instantly record their attendance. The system is made up of a database module, a face detection module, and a face recognition module. In the input image, the face detection module locates faces and crops the face region. A convolution neural network is used by the face recognition module to match the student record in the database with the appropriate face image. The student's face images and attendance records are kept in the database module. On a dataset of 100 students, the proposed system was tested, and its accuracy was 95%.

## **102. DIAGNOSIS OF GASTRIC CANCER IN ROLE OF ENDOSCOPIC IMAGING TECHNIQUES IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS -AN OVERVIEW**



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Gastric cancer is a serious medical issue because its occurrence and death rates are increasing all over the world. Furthermore, obesity, tobacco use, alcohol consumption, and a few dietary defence elements are known cancer-causing agents. In some nations, early detection strategies have been shown to reduce GC-related morbidity and mortality. It offers therapies that are minimally invasive like most effective procedure is endoscopic resection. The most appropriate standard for using a procedure that is typically secure to precisely evaluate the lesions region. It is simple method and it can be expected difficult techniques can be viewed as in early stage of tumor in accurate diagnosis. A few uses of computerized method have arisen in the field of gastric malignant growth. For example, image diagnosis-based prediction conclusion and guess expectation, because of its viable computational power and learning capabilities. As a result, a detailed outline of how artificial intelligence can be used to treat gastric cancer through image-based endoscopic diagnosis and machine learning analysis applications is provided. In this review, which demonstrates the future developments in this field for the early prediction of gastric cancer, it was also thoroughly discussed the possibility of AI models being overfitted, their accuracy, and their usefulness to clinical research in this field of image processing. In addition, in this review article was been detailed about synopsis of the therapy choices of malignant growth.

### **103. THYROID PREDICTION USING DATA MINING**

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Data mining techniques are essential for healthcare providers in diagnosing and treating diseases at an early stage with higher accuracy. In particular, thyroid diseases are prevalent worldwide, and their early diagnosis is critical for effective treatment. Using a variety of categorization techniques, this study aims to predict thyroid diseases and explore the connections between TSH, T3, T4, gender, and hyperthyroidism/hypothyroidism. Four classification models are compared, including Naive Bayes, Random Forest, Decision Tree and Logistic Regression, and found that the Random Forest model had the best classification rate. Data from the UCI machine learning repository was utilised to create and test the models. It is important to note that the majority of thyroid disease treatments require long-term medication or surgical intervention, making prevention crucial. Stress, infections, trauma, pollutants, low-calorie diets, and some drugs can all have an impact on how well the thyroid functions.

### **104. SUSTAINABLE MOBILE BATTERY MANAGEMENT: IOT-INTEGRATED MONITORING AND SOLAR-POWERED BACK COVER SOLUTION**

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This research paper presents the significance of effective battery management is growing more and more important as mobile devices continue to play a significant role in our everyday lives. The Internet of Things (IoT) and a solar-powered back cover are combined in this research article to present a sustainable strategy to managing mobile batteries. The suggested solution intends to improve battery health monitoring and guarantee that mobile devices wont deplete. Real-time monitoring of the mobile devices battery health metrics, such as charge level, temperature, and voltage, is made possible by the IoT-based monitoring system. This information is gathered and analysed to offer important insights into battery usage patterns and to spot potential problems that can hasten the deterioration or depletion of batteries. The research also looks at optimisation strategies to improve the solar-powered back cover's effectiveness. To ensure the highest possible energy conversion rate, various optimisation methods are used to find the best location and orientation for solar cells on the back cover. By extending battery life and reducing the need for conventional charging methods, this integration helps create a sustainable and environmentally responsible solution.

## **105. COMPARATIVE ANALYSIS OF GREEN BUILDING AND CONVENTIONAL BUILDING IN TIME AND RESOURCE MANAGEMENT**

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In today's world, the construction industry is one of the most popular and fastest growing industries in our country and around the world. Therefore, it is considered to be the second largest industry in India when it comes to generating huge income and employment. Creating a schedule and timeline for the project's completion entails analysis and planning. Formalized time management practices provide protection from unanticipated setbacks and erroneous or inflated project schedules. Resource management makes ensuring resource managers have instantaneous access to information on people and other resources so they can better regulate the delivery of services. The majority of materials used today to construct a typical structure are non-renewable and neither long-lasting nor energy-efficient. The development of structures with minimal use of natural resources during construction and operation is the goal of building initiatives. This project aims to compare and contrast a sustainable construction with a conventional one in order to highlight the advantages. The purpose of this project is to conduct a comparative study of conventional and green house construction in terms of Time Management using Primavera p6 software and Resource Management.

## **106. PLANNING, COSTING, AND DELAY MANAGEMENT OF AN APARTMENT BUILDING USING PRIMAVERA AND MSP: A COMPARATIVE STUDY**

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Disputes in the construction industry deteriorate. To start, the projects implementations cost and time must be improved if these conflicts are to be resolved. One instrument for doing this is to acquire a methodology for investigating and assessing the effectiveness of construction projects. Earned value management is the finest method for tracking the progress of a construction project (EVM). The construction project frequently experiences delays. Any task or operation that goes beyond schedule may slow down completion, which may result in disagreements and legal action. This dissertation focuses on the analysis of critical factors that can help decrease delays. Users of P6 and MS Project should be aware that the application employs time-based context (LF - EF and/or LS - ES) to calculate total float, which ignores the existence of resource constraints. Primavera and MS Project both offered several advantages, however Primavera received higher marks overall than MS Project. MS Project also received the highest marks for usability to demonstrate how effective planning and scheduling is done using Primavera and MS Project, an apartment building has been used in this study. This study intends to showcase both tools useful insights for the projects, findings also demonstrate how the needs for software tools fluctuate depending on the size of the project small, medium, or large and how well they work.

## **107. USING TRANSFER LEARNING TECHNIQUE FOR INVASIVE SPECIES MONITORING OF HYDRANGEA PLANT**

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Plant invasive species are those that have been unintentionally or purposely introduced through a variety of means to a foreign environment. It must overcome a number of challenges before it can be categorized as an invasive species, including moving from its native environment to the new one, contending with rival species for scarce resources, adapting, procreating, and ultimately spreading throughout the new area. This project focuses on monitoring one of the many invasive species, called Hydrangea. This plant root has numerous benefits and has been used as medicine for more than a decade by our ancestors. This is very successful medicine for prostate and bladder infections. This also serves as a powerful drug for enlarged prostate treatment and for handling kidney and bladder stones with less or no side effects. Deep learning is dominant in all areas of applications and hence the proposed work generates an efficient framework that recognizes Hydrangea invasive plants to be quickly removed in order to reduce the harm. The proposed CNN model analyses the images, and predicts the probability of the presence of Hydrangea in it. The aim is to predict the invasive species with as high accuracy as possible. The proposed model can be made use of later to identify, monitor, and predict various other invasive species as part of related future work.

## **108. DETECTION OF PLANT DISEASES IN CHILLI LEAVES USING MACHINE LEARNING**

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One of the most lamentable dangers to agribusiness is the spread of infections from wiped out to sound plants. On the off chance that not got early, moved infections can possibly spread all through the ranch. Techniques for distinguishing plant sicknesses make it feasible for the client to scale the ID of plant illnesses to countless plants for a minimal price and assist with recognizing contaminated plants in their earliest stages. Convolution Neural Networks (CNN) and K-nearest Neighbors (KNN) are the two particular machine learning (ML) models that will be utilized in this proposition to distinguish plant illnesses in Chilli leaves. To figure out which ML model was predominant, four measurements were utilized to analyze their presentation. The four particular measurements were as per the following: Precision, recall, and the F1-Score This study utilized the Local Interpretable Model-agnostic Explanations (LIME) to make sense of the forecasts made by every one of the ML models used to distinguish infections. A client study was led to survey client trust in the AI and XAI models and to accumulate maker criticism to give suggestions to future exploration. This was finished in the soul of social occasion skill in the space. The client concentrate on uncovered that ranchers have zero faith in the AI and XAI models, and the after effects of the execution of the ML models uncovered that the CNN model performed better compared to the KNN model in every one of the four assessment measurements. Be that as it may, the client concentrate on distinguishes regions where farmers trust can be expanded and reinforced in view of criticism from farmers.

## **109. SELF-TRANSFER ABILITY AND ACCESS TO MANY FUNCTIONALITIES INTERFERENCE ATM**

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This paper addresses the limitations of current ATM systems by proposing a novel solution to enhance convenience and security. Nowadays, ATM cards can be used in any ATM system, but users with multiple accounts face the challenge of carrying multiple cards and managing separate passwords. The focus of this research is on banking applications, particularly those related to ATM cards. Our proposed solution introduces an innovative ATM card that combines several bank accounts into a single card. By consolidating multiple accounts, users are relieved from the burden of carrying numerous cards and remembering separate passwords. Passwords, considered the weakest link in the information security chain even with encryption, are replaced with a more secure authentication method—fingerprint authentication. Fingerprint authentication ensures high-level security while offering user-friendly access to their consolidated accounts. This approach leverages advanced biometric technology to authenticate users, reducing the risks associated with password-based authentication. Furthermore, the proposed solution not only provides convenience and security but also presents potential cost-saving benefits for interbank transactions. By integrating the databases of various banks, the solution minimizes transaction costs by capitalizing on the differences between interbank databases.

## **110. BLOCKCHAIN INTEGRATING BIM DATA FOR CONSTRUCTION PROJECTS**

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Due to the complicated structure and numerous parties involved, the construction sector frequently has adversarial relationships, risk avoidance and a lack of trust among the various actors. The linear workflow ; that frequently leads to low efficiency, delays, rework, and avoidable waste exacerbates this culture. By establishing a decentralised, transparent system where all participants can access a common database, tracking and monitoring the project s various stages, and even automating some processes to increase efficiency and decrease delays and rework, blockchain technology can help to mitigate these problems. This study demonstrates the benefits of blockchain technology, especially how it can provide project data a single source of truth while enabling different stakeholders to access it. In order to improve the workflow of BIM projects and reduce the possibility of errors, blunders, or fraudulent actions, data must be shared in a secure and transparent manner. It has been demonstrated that the approach can recognise the degrees of expertise and can enhance the process of BIM deployment by testing the solution in a real-world bridge construction scenario. The suggested method enhances risk contingency in building projects, lowers costs, and gives stakeholders more confidence when sharing their BIM data. Through an experimental framework supported by an Ethereum public test network, the study offers a cost analysis to demonstrate the implications of adopting Blockchain for BIM data provenance. In order to enable communication with smart contracts and track the BIM data provenance process, a front-end web page has also been developed.

## **111. EFFECTIVE MODEL OF SMART STICK FOR OBSTACLEDETECTION AND NAVIGATION**

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The one who is having good vision (keen-sighted) has a freedom to move around without any external support to sense and detect the things around. But the one who is visually impaired needs support and that support is smart stick, which we have mentioned in this paper. The smart stick system comprises different units such as ultrasonic sensors, infrared sensor, water sensors which make it as a better alternative from the earlier white cane. These units respond in a quick manner in co-ordination to each other to detect the obstacle within the angular range and convey the danger to the visually impaired person. Also the proposed stick is light weight and consumption of power is low, that too at low cost which makes it affordable and user-friendly irrespective of age group of the individual.

### **112. A MEDICINAL TEXTILE MATERIAL DEVELOPMENT FOR SKIN AILMENTS HOLDING AYURVEDIC VALUE**

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This work aims in the generation of a textile material having medicinal value by holding the goodness of ayurvedic herbs. The proposed fabric could be effectively used for treating skin ailments or for up-bringing skin health. The basic concept of this textile development is that, a fabric will always be in touch with the skin of the wearer and if the same fabric is a carrier of medicine, it will eventually pass those goodness to skin cells and thus constant medication will be provided to the wearer. Here, the combination of herbs used for dyeing will be actual herbs which are used for the treatment of skin ailments in Ayurveda. Thus the textile material will definitely induce the medicinal value of those herbs to the wearer's body and the intended work of that wear will be achieved. Also the production technique used for this textile material could be an eco-friendly alternative for synthetic dyeing. Thus, it is a blessing for health and environment. This therapeutic textile material also aims in the replacement of chemical mordant with an eco-friendly one. In this work, cotton fabric was medicated with a combination of Teak leaves and pomegranate peel. The mordant used was alum. Also, the techniques of eco printing and herbal dyeing were used for the aesthetics.

### **113. A LITERATURE SURVEY ON MANAGING CULTURAL DIVERSITY AND GOVERNANCE PROCESS IN THE EDUCATION SECTOR**

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Background of the study: The main objective of the current study is to evaluate the process of governance for managing cultural diversity among faculty members to achieve a sustainable HRM in

the education sector. Aim/Purpose: This study aims to investigate, the application of governance for managing cultural diversity among faculty members for achieving a sustainable HRM in Community College for Jazan, in the Kingdom of Saudi Arabia. Importance: In the current trends, there is a need to achieve sustainable HRM not only in the corporates but also in the education sector. The current study mainly focuses on the application of diversity management practices and governance process in the education sector for achieving a sustainable HRM. Methods: In the current study, the relationship between diversity management and governance process among faculty members is reviewed by literature review method. Findings: Finally, the study concludes with the significance of relationship between diversity management and governance process among faculty members to achieve sustainable HRM in the education sector Results: Reviewing the correlation between diversity management and governance process among faculty members solves the problems of communication and interaction among employees having diverse backgrounds.

#### **114. APPLICATION OF AI, IOT AND ML FOR BUSINESS TRANSFORMATION OF THE AUTOMOTIVE SECTOR**

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Automotive industry is essential in human lives. It is not possible to imagine a day without driving or some public transport. Today, digital technologies are making motor vehicles and the industry more intelligent. The entire value chain of automotive business is transforming. A better connection with customers is needed. All this is possible through advanced digital technologies. Automotive companies are overhauling business processes and relationships. Legacy IT systems for manufacturing, engineering, supply chain etc. are being reinvented. This transformation encompasses software, robotics, connected devices, and artificial intelligence. Artificial intelligence (AI) made the dream of self-driving cars possible. AI will soon transform every device. Tesla, Google Waymo, and Nvidia are examples of machine learning algorithms used to detect how far different objects are, from the car. Augmented reality (AR) and virtual reality (VR) analysis enables users to watch blind spots. AI enhances security by simultaneous coordination with many sensors. With AR, VR and mixed reality (MR), automotive companies have a personalised retail platform and a competitive edge. This paper studies AI applications in the automotive sector. It studies the recent developments, and applications of AI. It discusses how companies use AI for cost reduction, market strategies, sales promotion, and even funding.

#### **115. THYROID DISEASE DETECTION USING CNN ALGORITHM**

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The thyroid gland, one of the biggest endocrine organs in the human body, controls daily metabolism. Death rates from thyroid disorders are decreased by early identification. Radiologists and pathologists typically diagnose thyroid illness, and this process strongly relies on their training and knowledge. This research demonstrates that deep learning-driven algorithms give good performance for automatic

identification of thyroid disorders, which provides doctors with support for diagnostic decision-making and reduces human false-positive diagnostic rates. This study is the first of its kind to use two pre-operative medical picture modalities to categorise different forms of thyroid illness. (i.e., normal, thyroiditis, cystic, multi-nodular goitre, adenoma, and cancer). This study develops a diagnostic model for thyroid disease based on the current state-of-the-art deep convolutional neural network (CNN) architecture to differentiate between the different disease kinds. The model achieves previously unheard-of performance for both medical picture sets, and for computed tomography (CT) scans and ultrasound images, respectively, it achieves accuracy of 0.972 and 0.942. The experimental outcomes show that the chosen CNN can adapt to both visual modalities, demonstrating the viability of the deep learning model and emphasising its potential clinical applications.

## **116. SMART AGRICULTURE TECHNIQUES**

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Smart agriculture techniques have emerged as a transformative solution to address the growing challenges faced by the agricultural sector, such as population growth, climate change, and resource scarcity. This abstract provides an overview of the key concepts and technologies employed in smart agriculture and highlights their potential benefits for enhancing efficiency and sustainability in farming practices. The adoption of smart agriculture techniques involves the integration of cutting-edge technologies such as the Internet of Things (IoT), big data analytics, artificial intelligence (AI), and remote sensing. IoT sensors and devices are deployed across agricultural fields to collect real-time data on various parameters, including soil moisture, temperature, humidity, and crop growth. This data is then transmitted and analyzed using AI and big data analytics, providing farmers with valuable insights and actionable recommendations. Through the utilization of smart agriculture techniques, farmers can optimize their resource management practices. Precise irrigation systems, guided by real-time data, help minimize water wastage and reduce the risk of water stress in crops. Similarly, smart fertilization strategies ensure that nutrients are applied in the right amount and at the right time, reducing environmental pollution and enhancing crop yield. Moreover, intelligent pest and disease management systems enable early detection and targeted interventions, minimizing the need for broad-spectrum chemical treatments. Furthermore, smart agriculture techniques contribute to the implementation of sustainable farming practices. By monitoring and managing soil conditions, farmers can prevent soil degradation and erosion, promoting long-term soil health. Integrated pest management systems reduce reliance on harmful pesticides, safeguarding ecosystem health and biodiversity. Additionally, the optimization of resource usage leads to increased energy efficiency and reduced carbon footprint. The implementation of smart agriculture techniques also facilitates improved decision-making and planning. Real-time monitoring and predictive analytics enable farmers to respond promptly to changing environmental conditions and market dynamics, optimizing crop yield and economic returns. Data-driven insights empower farmers to make informed decisions regarding crop selection, planting schedules, and harvesting strategies. In conclusion, smart agriculture techniques hold immense potential for revolutionizing the agricultural sector, promoting sustainable and efficient farming practices. By leveraging advanced technologies and data-driven insights, farmers can enhance productivity, reduce resource waste, and mitigate environmental impact. The adoption of smart agriculture is crucial for ensuring food security, economic growth, and environmental sustainability in the face of global challenges.



## **117. INTEGRATING 4D-BIM WITH PRIMAVERA SOFTWARE FOR MONITORING METRO RAIL PROJECT**

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More than 26 metro rail projects are now underway in India at various stages of planning, building, and operation. This study's primary goal is to pinpoint the significant elements that cause delays in the commissioning of metro rail projects in India. The critical path technique in Primavera, places a strong emphasis on updating the network to monitor progress and spot delays. New challenges concerning their use and viability in these Indian metro-rail projects come up when integrated digital delivery systems are adopted more widely around the globe in infrastructure projects. BIM displays the precise geometrical and semantic details of the structure. Schedules and drawings are linked together using software like Navisworks. The integration is crucial for contractors who want to show owners that they understand how to complete the project by simulating construction and using 4D scheduling. This concept also contributes to the confirmation that the planned job can be finished in the allocated period. According to the study's findings, this approach has several downsides, particularly when used in the construction industry for data management, data sharing, and data integration. Also, the integration of BIM in Primavera is examined, and various solutions to the shortcomings of the construction programme are presented.

## **118. MODELING, CLASH DETECTION, QUANTIFICATION AND COST ESTIMATION OF METRO RAIL PROJECT USING 4D BIM**

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One of the most important reasons for poor performance in Architecture, Engineering and Construction (AEC) is the visualization of construction processes and communication between different work groups. Lean construction seeks to reduce and eliminate waste in construction processes, while BIM seeks to improve collaboration among project team members. The construction industry is said to be the fourth most dangerous sector in terms of death toll. Emergency evacuation risk assessment is a challenging task due to the ever-changing nature of complex construction sites. This study developed a model to analyze the risks associated with fire emergency events and evacuation performance (the response to that emergency) through an integrated approach at complex construction sites. By providing a creative framework, workflow, and logical operation for cash flow management with BIM, this study aimed to satisfy this demand. The suggested framework is capable of: (1) precisely predicting the cash flow of projects, accounting for payment patterns for supplies, tools, labour, and subcontractors, as well as contract-related qualities; and (2) evaluating the effects of significant risk variables on the cash flow of projects. The study's approach, in terms of methodology, is to provide a proof of concept (PoC). This study developed a model to analyze the risks associated with fire emergency events and evacuation performance (the response to that emergency) through an integrated approach at complex construction sites.

## **119. PROTECTING THE SECRECY OF THE VIDEO USING ADVANCED DATA HIDING**

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We propose a advanced video hiding technique to protect the data which need to be secure so that the piracy and the security of the data is maintained without falling into wrong hands. The message or data such as text , audio , video and files are embedded into a video .The video is of Audio Video Interleave (AVI) format and the data is embedded using h.264 algorithm , slicing and macro block technique. The video is secured using encryption and decryption using Advanced Encryption Standard (AES) algorithm. The sender secures the video using a key , the receiver can retrieve the data only when the key is entered thus by protecting the data. This method is used to transfer information securely by hiding the data in a video, the third party doesn t know that there is a data hidden in the video , they look just like a normal video without any traces of the data hidden inside it.

## **120. CNN-PREDICATED DEEP LEARNING MODEL FOR BRAIN TUMOR DIAGNOSIS IN MRI IMAGES**

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Brain tumor diagnosis in earlier is vital for improving therapy outcomes and, ultimately, patient survivability. Manually identifying the magnetic resonance imaging (MRI) images that are frequently produced in clinics is difficult. The requisite for computer-aided approaches with greater accuracy for primary tumor detection is therefore crucial. Employing MRI images, computer-assisted brain tumor diagnosis uses segmentation, categorization, and tumor detection techniques. For the last few decades, a lot of research has focused on conventional or typical machine learning (ML) techniques for identifying brain tumors. However, the model's detection accuracy is less. Thus, a novel CNN method is developed for brain tumor diagnosis. The developed model has six stages: data collection, data

augmentation, pre-processing, feature extraction, segmentation, and detection. In data collection, MRI images were collected from Kaggle; whereas, in CNN the feature extraction, segmentation, and diagnosis process were performed. Moreover, feature extraction was done in convolutional layer; segmentation process was performed in max-pooling layer; and in dense layer, the detection process was done. Furthermore, the model's performance has been evaluated in regards to accuracy and loss. The proposed method yield accuracy of 97.79%. Furthermore, accuracy comparison has been performed to identify the effectiveness of the presented model over existing methods.

## **121. NETWORK INTRUSION DETECTION SYSTEM USING MACHINE LEARNING**

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The rapid growth of the internet and communication sectors has led to an increase in network capacity and bandwidth. However, this growth has also resulted in new and more complex security threats, making it increasingly difficult for network security systems to effectively detect and prevent intrusions. An intrusion detection system (IDS) is a security device that monitors network traffic for signs of intrusion or malicious activity. The main objective of an IDS is to ensure the confidentiality, integrity, and availability of network resources by detecting and responding to security incidents in a timely and effective manner. While intrusion detection systems (IDS) have improved over the years, there is still room for improvement in terms of detection accuracy, false alarm rates, and detecting new and previously unknown types of intrusions. The internet is being used more and more by everyone. The most valuable resource on earth is information. At all times, information must be kept out of the wrong hands. When one network is infiltrated, information is stolen. An intrusion detection system detects both known and unidentified threats, protecting a network from being breached. An intrusion detection system can learn to identify DOS, Probe, U2R, and R2L attacks according to this study. There are numerous categorization machine learning algorithms are used to differentiate between attack and ordinary packets. Machine learning classification methods are often used to distinguish between attack and regular packets. The data set is used to compare the performance of K-Nearest Neighbour(KNN), Logistic Regression, Support Vector Machine(SVM) and Multi-layer Perceptron against other widely used machine learning methods. According to the results, KNN and SVM are the best techniques for spotting network breaches.

## **122. STUDY AND DESIGN OF SIMPLE ROUTER WITH H-SCHEDULER USING VCT TECHNIQUE**

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The phrase ;System-On-Chip (SoC) refers to the integration of all electronic blocks of sophisticated computer systems into a single chip with additional functionality. To address the issue of scalability in SoCs, Network on Chip is an effective approach that meets with the connectivity needs of the next generation of SoCs. In NoC architecture, router plays an important role for efficient communication, as data is routed via networks in the form of packets/flits. NoC technology, which is capable of responding to a wide range of multiprocessor requirements, encounters issues with dynamic routing connections such as traffic congestion, power consumption, and latency, all of which contribute to a networks low efficiency. This paper mainly focuses on modules of router design and its top level architecture and their synchronisation .We have simulated various sub modules of a router and finally connected it to top module. We have used Virtual Cut Through technique with H-Scheduler which provides low power consumption and whole architecture design is verified in Xilinx ISE 14.6 using Verilog and Power is analysed as Xpower Tool.

### **123. CROP RECOMMENDATION SYSTEMS USING MACHINE LEARNING ALGORITHMS**

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Agriculture is the mainstay of all the countries. Due to the decreased size of a farming parkland, it has become a most important issue in picking the maximum fitting crop based on current factors in a

particular field. The difficulty of young farmers in India to estimate the ideal crop based on their needs is one of the most significant problems they face. This problem arises due to the ecological factors like rainfall, humidity, temperature etc. Machine learning(ML) is a part of AI, which enable computers to be trained from experience being clearly programmed. The goal of ML is to create computer programmes so as to access the data and exploit it to learn for themselves. The crop recommender assistant will suggest the proper crop based on the parameters such as NPK nutrients, humidity, temperature along with pH values with the help of Machine Learning algorithms.

## **124. ENHANCING SECURE COMMUNICATION IN IOT-BASED AUTOMATED VEHICLE SYSTEMS THROUGH ACCURATE PREDICTION OF ABNORMAL TRAFFIC DATA**

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Ensuring secure communication among Automated Vehicles (AV) in the Internet of Things (IoT) applications require accurate prediction of abnormal traffic data. Information security within vehicles is crucial for transmitting traffic-related information reliably and guiding vehicles along the correct path. Existing algorithms for classification and prediction have aimed to provide clear predictions of malicious data. However, traditional techniques have faced challenges in achieving both accuracy and computational efficiency. This study proposes a three-stage implementation to address these issues. The first phase involves pre-processing to reduce computational complexities. This initial step streamlines the data for further analysis. The processed data then undergoes feature selection in the second phase, employing a multi-GGA (Greedy Genetic Algorithm) approach to identify the most relevant features. By utilizing this algorithm, the system can detect significant information even in the presence of misleading data. Finally, the third phase involves classification using a combination of Random Forest (RF) and AdaBoost algorithms. This integrated approach enables the system to distinguish between normal and abnormal traffic data in vehicle-to-vehicle datasets. Through experimental evaluations and comparative analysis, the efficiency of the proposed system is demonstrated in terms of accuracy, precision, recall, and F1-score, outperforming several existing algorithms. Overall, this proposed prediction system shows great potential in effectively classifying misleading and normal data with high accuracy. By addressing the limitations of traditional

Techniques, it offers a reliable solution for secure communication and decision-making in AV systems.

## **125. A STUDY ON CUSTOMER PREFERENCE TOWARDS OVER-THE-TOP(OTT) PLATFORMS IN KERALA**

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Over-the-top (OTT) video consumption in India has drastically transformed in recent years as a result of advancements in digital infrastructure and efforts by platforms to offer customers engaging content at reasonable prices. The popularity of long-form video content is expanding as OTT consumption transforms from specialized to mass-based content. Online video content that is available for free frequently attracts consumers. Yet, a user of OTT may decide to subscribe to these video streaming services because of certain factors. This study aims to identify the influencing factors for customers to buy these premium services as well as the OTT platform and genre that would give them the maximum level of satisfaction when compared to theatres. Using a descriptive methodology and simple random sampling method, the research is mostly done with 200 respondents, and the questionnaire is the primary data collection tool. Paired sample t-test has been used to analyse the data using SPSS to test the developed hypothesis and derive conclusions. In view of the fact that most users tend to increase their usage, it is assumed that during the Covid pandemic, users had a significant and favourable impact on the consumption of OTT platforms.

## **126. CONSTRUCTION STAGE ANALYSIS OF CABLE STAYED BRIDGE**

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Cable stayed Bridges are gaining considerable recognition as a solution for functional, structural and aesthetic requirements of bridges. Many such bridges have been constructed around the world and bridge designers look towards this bridge as the future of bridge construction. Cable stayed bridges can span up to 1000m or more and so they are also looked upon as a solution for long span bridge construction. While the design of such a bridge has its own range of challenges, the construction is an even bigger challenge. Due to this, at the design stage, the construction stage analysis has to be done to ensure that the structure can be constructed taking into account all the loads which come onto the structure during construction of the various stages. During construction, there are many activities which result in the application of load on the previously constructed structural member or members.

These loads are called erection loads or construction stage loads and they get applied due to application of succeeding members, placement of machinery, lever arm reaction of machinery, pre-tensioning of the cables besides other activities. The positioning of such loads and machinery result in direct or eccentric loads which cause deflections and moments during the various stages of construction which vary as the construction goes along. There are two types of analysis, the forward construction stage analysis and the backward construction stage analysis. In this paper parameters are compared for construction stage analysis and final stage analysis of a bridge under dead load. Parameters such as bending moments in the deck, displacements and axial forces will be compared. The deformed shape is compared as well. MIDAS Civil software is used to do the construction stage analysis.

## **127. ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN DRUG DISCOVERY AND DEVELOPMENT**

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Currently rapid-fire of artificial intelligence and machine learning gets more significant. It has performed various human works in clear and improved manner. In this article we have discussed about use of artificial intelligence and machine learning in augment drug discovery and development to make them more efficient and accurate. In this paper we mention the use of AI in various sectors of pharmaceutical industry such as drug discovery and development, pharmaceutical product management, clinical trial, pharmaceutical manufacturing including quality assurance & quality control. To enforcing the AI we used some tools and techniques. Such as artificial neural networks (ANNs), Recurrent neural network, Convolutional neural network, Decision tree all these data. The widespread application of machine learning and artificial intelligence methods in drug discovery demonstrate a promising future for these technologies: these all are make researchers, students, pharmaceutical industry to learn deeper about machine learning algorithm like random forest, regression tree, classification. Therapeutics machine learning is an front running field with amazing opportunities for innovation and impact. To date Therapeutics Data Commons includes 66 AI-ready datasets spread across 22 learning tasks, 33 data functions with meaningful data splits, 23 strategies for systematic model evaluation, 17 molecule generation oracles and 29 public leader boards. By using python library we can access and artificial intelligence in a drug discovery and development environment.

## **128. DUAL-DIAMETER CARBON NANOTUBE FIELD EFFECT TRANSISTORS SRAM CELL**

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Most computer systems utilize SRAM cells as cache memory. Carbon nanotubes have emerged as promising devices in the semiconductor industry. By virtue of their robust nature, carbon nanotube field effect transistors are employed in designing the SRAM cell to attain higher speed, improved stability, and reduced energy consumption. A dual-diameter CNTFET SRAM Cell has been devised and executed utilizing Cadence Virtuoso. The stability analysis of this design has been assessed through the butterfly curve and  $N_{\text{curve}}$  metrics, with  $N_{\text{curve}}$  metrics deemed more suitable than the butterfly curve. Carbon nanotube field effect transistors are utilized in the DDC SRAM Cell due to their high electrical property. The comprehensive performance metric, including delay, stability, and power, is evaluated in the proposed design, with the delay being assessed through the performance metric SPR.

## **129. INTERIOR NAVIGATION SYSTEM USING ARTIFICIAL INTELLIGENCE**

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For interior navigation systems, it is imprecise to monitor GPS satellite signals. The main goal is to find your way around different areas of big structures like airports, hospitals, shopping malls, and other places where GPS satellite signals may be carefully tracked for navigation purposes. People may orient themselves and move through big structures with the assistance of the augmented reality-based navigation system. SLAM, or simultaneous localization and mapping, is the technique in use. Four modules make up the project: AR path displaying, QR-code repositioning, Unity Navmesh navigation, and ARCore localization. The user uses a mobile app to scan a QR code, and after picking a location, the app shows the user the route to go while using augmented reality objects (arrows). The AStar pathfinding algorithm is used by the app to guide the user along the straightest path.

## **130. EVALUATION OF GROUND WATER QUALITY FOR PRE MONSOON VARIATION IN PHYSICO-CHEMICAL PARAMETERS AND HEAVY METALS IN AND AROUND KANCHIPURAM**

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Ground water quality for physico-chemical parameters and heavy metals in and around Kanchipuram has examined, which is having intricate sources of contaminants were known. Water analysis data for



twenty ground water samples collected in pre monsoon season from bore wells were used. The results indicated that the ground waters show wide variation among different parameters between post monsoon season during 2021. The current research work is attempted to identify the ground water quality in twenty sampling stations in and around Kanchipuram. The physico-chemical parameters which are very essential for potable purpose like pH, Electrical Conductivity, Chloride, Total Hardness, Total Dissolved Solids, Calcium, Magnesium, Fluoride, Turbidity, Total Alkalinity, Iron, Nitrate, Nitrite, Free Ammonia, heavy metals such as Copper, Lead, Chromium, Cadmium, Zinc were analyzed and noticed that the water in the present study area is of poor quality. The results identified that the water for the purpose of potable or drinking by both people like urban or rural of the study area is not considered the BIS standards and mainly in twenty sampling stations revealing poor or unfit for potable water quality in that season.

### **131. THERAPEUTIC EFFICIENCIES OF THE BIOACTIVE POLYPHENOLS FROM TERMINALIA CHEBULA TO TREAT DIABETIC NEPHROPATHY-A COMPUTATIONAL STUDY.**

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Terminalia chebula, a plant used in traditional medicine possesses anti-inflammatory properties, cardioprotective, neuroprotective, immune suppressive, anti-diabetic properties. Diabetic nephropathy, a microcardiovascular disease which is associated with diabetes mellitus and diabetes insipidus, characterized by inflammation, albuminuria, proteinuria leading to chronic fibroblast and tubular injury. This study focuses on the use of Terminalia chebula for the treatment and management of diabetic nephropathy. Each compound was checked for its properties of pharmacokinetic properties through ADMETSAR, an online platform. Compounds below the threshold value of for pharmacokinetic properties are scrutinized. Parallely, compounds are checked for drug likeliness properties of pharmacodynamic properties using DruLito software tool. Eight compounds of Ricinoleic acid, celestrol, chebulic acid, maslinic acid, Caffeic acid, daucosterol, pyrogallol, vanilic acid satisfied the properties for pharmacokinetics and pharmacodynamics. Selected ligands were studied for bioactivity prediction using molinspiration online software tool. Parallely, target receptors for diabetic neuropathy of protein kinase C, PPAR, Receptor, Advanced Glycation End products, Human angiotensin receptor and L-alanine glyoxal aminotransferase. Selected ligands are docked separately for each target protein using docking platform PyRx tool and the results were interpreted. Based on the binding energy, ligands of daucosterol and maslinic acid for protein kinase C receptor, celestrol for PPAR receptor, vanilic acid for Advanced glycation end products, celestrol for human angiotensin receptor and L-alanine glyoxal aminotransferase. This confirms that Terminalia chebula can be constituted for drug molecules for treating diabetic nephropathy.

### **132. DAILYFEED - DAILY NEWS APP FOR IOS**

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The usage of smartphones has elevated exponentially in the very recent years. iOS can be considered as the most popular and infamous smartphone platform, while the convenience of utilizing it along with the computational domination in the array of applications that grabs the attention of millions of users all over globe, which also demands the security concerns on this platform. This research paper gives an analysis over the features of the daily feed app that runs on iOS on a wide range of devices. As technology is rapidly evolving on this planet we possess a very rapid connection and network to instantly interconnect to one other. The usage of tablets and mobiles is increasing day by day and most of the world population already possess these facilities. In this rapid and data-oriented world every citizen needs to be updated with all the incidents and the emergency information. This news application can be considered as an iOS mobile app where users can get access to acknowledge themselves regarding the news from countries all over the world. The primary motive of this application is to news articles from every corner of the planet and deliver it to the citizens or the reader in the fastest way possible.

### **133. INTELLIGENT AND SECURED CLOUD SERVICE MANAGEMENT USING SMART DATA HASHING ALGORITHM**

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The primary goal of this system is to provide a duplication-free cloud server with strong encryption and decryption information logical reasoning without the need of registration centers. With the fast growth of cloud computing, an increasing number of clients want to preserve their information in the cloud servers. New security issues must be addressed in order to assist more clients in processing their data on the public cloud. All clouds have particular space management issues, necessitating the development of a novel method in the proposed system that enables duplication-free data services in a cloud environment. Security is the primary restriction in a cloud computing environment, illustrating the necessity of avoiding third-party registration centers in a distant server-based data maintenance scheme. We follow the maximizing of security utility principle in our system by utilizing a strong Smart Data Hashing Algorithm (SDHA) that processes data using a 256-bit unbreakable encryption technique.

### **134. RECENT ADVANCEMENTS IN 3-D PRINTING IN MEDICAL APPLICATIONS**

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The field of three-dimensional (3D) printing has witnessed significant advancements in recent years, and its potential for revolutionizing medical applications is rapidly emerging. This review aims to provide an overview of the current state and scope of 3D printing in the medical field. The review begins by highlighting the various 3D printing technologies currently employed in healthcare settings, including stereolithography, selective laser sintering, fused deposition modeling, and inkjet printing. Each technology's advantages and limitations are discussed, shedding light on their suitability for different medical applications. Next, the review delves into the diverse range of medical applications where 3D printing has shown promise. These applications include the fabrication of patient-specific anatomical models for preoperative planning, surgical guides and tools, customized implants and prosthetics, tissue engineering scaffolds, and drug delivery systems. The potential benefits of using 3D printing in these areas, such as enhanced surgical accuracy, improved patient outcomes, reduced surgery time, and personalized medicine, are explored. Furthermore, the review addresses the challenges and limitations associated with implementing 3D printing in medical settings. These challenges include regulatory concerns, standardization of processes, material biocompatibility, cost-effectiveness, and scalability. The ongoing efforts to overcome these barriers and the future directions of 3D printing in medicine are also discussed. In conclusion, 3D printing holds immense potential for transforming various aspects of medical practice. While considerable progress has been made, there are still challenges to be addressed before widespread adoption can be achieved. With continued research and development, coupled with regulatory support and collaboration between academia, industry, and healthcare professionals, 3D printing is poised to make a substantial impact in the field of medicine, improving patient care and treatment outcomes.

### **135. EDGE SUM DIVISOR CORDIAL LABELING OF CROWN GRAPH**

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Let  $\Omega = (W(\Omega), E(\Omega))$  be a graph which is having neither loop nor multiple edges, where  $W(\Omega)$  represent vertex set and  $E(\Omega)$  represent edge set and let  $h: E(\Omega) \rightarrow \{1, 2, \dots, |E(\Omega)|\}$  be a bijection. For each node  $u$ , give it a label of 1 if  $2 \mid h(b_1) + h(b_2) + \dots + h(b_s)$  and 0 if it doesn't where  $b_1, b_2, \dots, b_s$  are edges that are incident with the node  $u$ . If the difference between nodes categorized 0 and 1 is less than 1, the function  $h$  is called ESDC labelling. A ESDC graph is one that has the ESDC labeling. In this paper, we proved the crown graph  $C_t \square K_1$  is ESDC graph when  $t$  is even.

### **136. STUDY OF CRACK WIDTH ASSESSMENT AND PROPAGATION IN RCC & MASONRY STRUCTURES**

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The structures that are exhibiting rapid sign of distress requires immediate assistance in order to identify the underlying causes of their distress, constitute an accurate diagnosis, and determine the most appropriate approach for proper treatment and the rehabilitation of the structures. If not addressed properly these changes could cause distress. Both RCC and masonry construction will undoubtedly develop cracks over time. One of the specifications for structural concrete elements serviceability is the crack width calculation which results due to low tensile strength of concrete. When subjected to service loads. For concrete structure to resemble appealing and to last for a long time, controlling cracking is crucial. In this paper, the degradation of RCC and masonry structures is investigated experimentally. The crack measurement gauge is utilized in this empirical investigation to monitor the cracking in the structures. The degree of structural threat associated with a building can be established through the identification of such cracks. The cracks characteristics obtained from the experimental measurements utilized to manage with appropriate measures, the study provides a thorough examination of understanding, monitoring the cracks and estimating the equations from the same.

### **137. ANALYSIS OF PEB WITH SINGLE AND MULTIPLE GABLES**

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Pre-Engineered buildings are a modern way of construction of traditional steel buildings that results in reduction of weight and cost of the structure. A large number of studies have been conducted to find out the benefits of a PEB (Pre-Engineered building) over CSB (Conventional steel building). In the present study, an attempt is made to study the performance of PEB structures with varying spans and configurations. The response of the structures is compared in terms of displacements, maximum bending moments, support reactions and weights of the structures. The effects of varying height of the structure are also studied.

### **138. DESIGN OF EFFICIENT PIPELINED PARALLEL PREFIX LANDER FISCHER BASED ON CARRY SELECT ADDER**

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Every digital processing system may execute basic operations like adding and subtracting by using a number of binary adders with various addition durations (latency), space constraints, and power requirements. The Power delaying Products (PDP) of digital signal processor (DSP) components must be kept to a minimum in order to achieve greater effectiveness in extremely large-scale integration platforms. The types of adders that utilize prefixed functioning for effective additions are parallel-prefix adders or carrying tree adders. Because of their capabilities for high speeds computing, Parallel-Prefix adders are the most employed adders nowadays. It's referred to as a carry tree adder, which is much faster than rippling carrier adders, carrier skipping adders, carrier selection adders (CSA), etc., and does arithmetic addition using the prefix function. This research compares the effectiveness of findings on the characteristics of region, latency, and power for a 32-bit implementation of several Parallel Prefix Ladner- Fischer adders. The Ladner-Fischer adder with a black cell requires a lot of memory to operate. To increase the effectiveness of the Ladner-Fischer Adder, the grey cell can thus be used as a substitute for the black cell. The prescribed technique operations are divided into three primary steps: prior processing, generations, and subsequent processing. The propagation and generation phases are the pre- processing step. The generating phase concentrates on carry generation, whereas the post-processing step concentrates on the outcome. The addition process in an effective Ladner-Fischer adder is not delayed for the previous bit addition functioning, and changes are made at the level of the gate to increase speed and reduce area. Especially compared to the prior bit adders utilized by processing units, implementing (Simulation and Synthesis) outcomes actually produces significant enhancements in power and power-delay products. This research calculates the Logic and routing delayed effectiveness of the suggested architecture. According to the findings of the study, CSA with a parallel prefix adder performs better than the traditional adapted CSA and uses less space.

### **139. PERFORMANCE EVALUATION OF POST TENSIONED SLABS USING EARTHQUAKE TIME HISTORY**

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The method of constructing multi-storeyed buildings using post-tensioned slabs has gained popularity in many countries. This method of construction has various advantages over conventionally reinforced concrete slabs, such as increased strength, reduced deflection, and greater durability. Post-tensioned (PT slab) slabs are commonly used in various construction applications, including large-span floor systems in buildings, bridges, parking structures, and industrial facilities. In earthquake-prone regions, the seismic performance of multi-storeyed buildings becomes an important aspect to study. Ensuring that buildings and infrastructure can withstand the powerful forces generated by earthquakes is crucial for ensuring the safety of occupants and preserving the overall structural integrity. In this study, the response of a multi-storeyed building considering three cases of floor systems is studied using time history analysis. The different cases of floor systems used are conventional R.C.C. slab, post-tensioned slab without drop panels and post-tensioned slab with drop panels. The FEM analysis of the three models has been performed by subjecting the models to ground motion of Bhuj earthquake. The response of the buildings is observed in terms of storey displacements, joint displacements, storey shears and story drifts as per IS code provisions. It is observed that the storey displacement is Maximum in building with post-tensioned slab without drop panels. The introduction of drop panels in the post-tensioned slab show improvement in performance.

#### **140. MACHINE LEARNING METHOD FOR CLASSIFICATION OF ROCKS AND STRUCTURES USING OUTLIER FILTER**

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Many situations require knowledge of the rocks, building or structures. Examples of such analyses are mining, rescue operations and sailing of ships. The real time analysis of the rocks and structures is one

of the research areas where there are much things to explore and problems to solve. I propose a solution for the problem of real time analysis of the rocks and structures based on machine learning algorithm. The structure and other properties of the rocks, debris and icebergs are obtained through advanced imaging system and sensors. Support Vector Machine (SVM) is one of the best machine learning techniques for performing classification. Density based Support Vector Machine [DSVM] detects and removes the outliers before the classification process. The proposed process classifies and predicts the type of rock under study with accuracy of 85% when compared with the actual characteristics of the rock.

#### **141. CAMGUARD: PREVENTING UNAUTHORISED CAMERA ACCESS FOR WOMEN'S SAFTEY**

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Online harassment is a serious problem that can have significant negative impacts on the mental health and well-being of its victims. To address this issue, an Android app has been developed that is accessible to a wide range of users worldwide. The app is built on a script backend process, providing a stable and efficient environment for data management and request processing. The app's API is integrated into the script backend process, ensuring seamless and efficient operation. During the installation process, the app requires users to go through a verification process that includes providing their Google Account, mobile number, and an OTP. This ensures that only legitimate users have access to the app's features and functions. The app also requires users to create a strong master password, which is directly connected to the Google bot, enhancing its security. Biometrics are recommended to protect the master password, ensuring that only authorized users can access their data. The app's security measures are crucial in ensuring the privacy and protection of user data. The use of biometrics and direct connection to the Google bot enhances security, and the app's API provides access to relevant information and enhances the user experience. Users can change their password securely, ensuring that only authorized users can access their data. Overall, the app is a reliable and efficient solution for managing and protecting user data. Its compatibility with a wide range of devices and seamless integration of API make it accessible to a large percentage of Android users worldwide. The app's verification process, use of biometrics, and direct connection to the Google bot enhance its security, ensuring that only authorized users have access to the app's functionalities. The development of this app is a critical step in addressing the issue of online harassment and protecting the privacy and well-being of its users.

#### **142. A STUDY ON THE FINANCIAL LITERACY AMONG THE COLLEGE STUDENTS OF THE KOLLAM DISTRICT OF KERALA**

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Being financially literate while in college aids in bringing discipline to the compulsive spending of the students, and it also has a significant impact on their future lives because how they handle money today will affect how they handle it later. A person must be financially educated in order to make wise decisions regarding financial matters and prevent negative consequences. Financial literacy is extremely important in everyones life. As a result of the fact that we deal with money daily, managing money is crucial for living a financially stable life. This paper examines the financial literacy of students studying in the Kollam district of Kerala, India. For this purpose, data is collected from students studying in various colleges located in the Kollam district. Additionally, this study aims to determine how parental wealth impacts students financial literacy. However, financial literacy is generally low among students for various reasons. Nevertheless, a variety of online courses are now accessible to improve financial literacy thanks to the development of the internet.

### **143. EARTHQUAKE ANALYSIS OF ST. ESTEVAM FORT – GOA INCLUDING SOIL STRUCTURE INTERACTION**

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The research aims to conduct earthquake analysis including soil structure interaction of the stone masonry heritage structure. Most of the heritage structures are constructed using unreinforced stone masonry. When such structures are subjected to unpredictable events such as earthquake, damages are caused to wall and roof of the structure. In this study St. Estevam Fort at Juvem, Goa is modelled along with soil layers using finite element method. To analyse the system, ground motion data from El Centro earthquake is applied to soil and masonry structure using time history method. Considering the actual recorded data and incorporating it into analysis enhances the understanding of how the structure and soil layer interact during an earthquake. The mode shapes and relative displacements of the fort subjected to ground motion are studied. The retrofitting of the damaged portion of the walls is proposed based on maintenance guidelines proposed in Handbook of conservation of Heritage Buildings by CPWD.



#### **144. ADVANCING MELANOMA DIAGNOSIS WITH SELF- SUPERVISED NEURAL NETWORKS: EVALUATING THE EFFECTIVENESS OF DIFFERENT TECHNIQUES**

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We investigate the potential of self-supervision in improving the accuracy of deep learning models trained to classify melanoma patches. Various self-supervision techniques such as rotation prediction, missing patch prediction, and corruption removal were implemented and assessed for their impact on the convolutional neural network s performance. Preliminary results suggest a positive influence of self- supervision methods on the model s accuracy. The study notably demonstrates the efficacy of the corruption removal method in enhancing model performance. Despite observable improvements, we conclude that the self-supervised models have considerable potential for further enhancement, achievable through training over more epochs or expanding the dataset. We suggest exploring other self-supervision methods like Bootstrap Your Own Latent (BYOL) and contrastive learning in future research, emphasizing the cost- benefit trade-off due to their resource-intensive nature. The findings underline the promise of self-supervision in augmenting melanoma detection capabilities of deep learning models.

#### **145. A COMPARATIVE STUDY OF DATA HIDING TECHNIQUES FOR DIFFERENT IMAGE CATEGORIES**

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The study focuses on enhancing the perceptual appearance of shortened pictures that contain concealed content within them. It proposes a two-phase data concealment approach that integrates natural visual abilities to achieve this enhancement. The context in which this study is conducted is in intelligent capitals, where the Internet of Things (IoT) plays a significant role in gathering various sources of visual data for enhanced administration. When transmitting data over a public network, safety concerns are crucial. To address this, the study introduces a unique information concealing procedure for picture decompression using Absolute Moment Block Truncation Codes (AMBTC). AMBTC is utilized as a means to improve bandwidth utilization while satisfying safety requirements. By employing AMBTC, the study aims to maintain the original moments of the image while reducing mean squared errors (MSE) more effectively than with Block Truncation Code (BTC). The study also highlights the importance of being able to restore the original picture after data concealment.

However, the amount of recoverable knowledge may be reduced, or additional knowledge might be required for recovery from the stego picture (the image with concealed data) to maintain the ability to revert to the associated stego image. The approach known as Least Significant Bit (LSB) is Mentioned, which involves altering the LSB of images to incorporate digital hidden information into the host picture. This technique does not require additional information for restoration and recovery, but it may not fully restore the stego picture to its original state. In summary, this study presents a two-phase data concealment approach using AMBTC to enhance the perceptual appearance of shortened pictures containing concealed content. The ability to restore the original picture is emphasized, and the LSB approach is mentioned as a means of digital information concealment.

#### **146. ADVANCEMENTS IN NANOSTRUCTURED MATERIALS FOR SUSTAINABLE ENERGY HARVESTING AND STORAGE**

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Nanostructured materials have emerged as a promising solution for sustainable energy harvesting and storage. their unique properties and enhanced performance make them ideal candidates for various applications, including solar cells, batteries, and super capacitors. This paper presents an overview of the recent advancements in nanostructured materials for energy conversion and storage, highlighting their benefits, challenges, and potential future directions. the discussion encompasses different types of nanostructured materials, such as nanoparticles, nanowires, and nanostructured composites, and their applications in sustainable energy technologies. Additionally, the paper explores the role of nanotechnology in improving energy efficiency and reducing environmental impact. overall, this paper aims to shed light on the significant contributions of nanostructured materials towards achieving a sustainable energy future

#### **147. COMPARATIVE ANALYSIS OF SENTIMENT ANALYSIS TOOLS**

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Sentimental Analysis is most popular research context right now where multiple Research and Development are going on a most of the part right now remain untouched. S.A is basically collecting text through the internet then summarized them to find out emotions which is trying to convey through the text. A text could be comments, reviews or other document related to the subject. Through the internet we can easily find out ‘What is the perception of people on a topic?’. Sentimental analysis helps to collect general opinion about the subject. In this research we try compare multiple tools which are openly available of sentimental analysis with the help of their technologies that are used in them and try to figure out which one suitable for Sentimental Analysis on social media.

#### **148. DEEP LEARNING-BASED RECOGNITION OF OCULAR DISEASE IN FUNDUS IMAGES.**

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This system aims in developing a deep learning model which helps in recognition of ocular diseases present in the fundus images, specifically cataract, diabetic retinopathy and glaucoma. The system utilizes a dataset of fundus images that are labeled with disease categories which are used for training the convolutional neural network (CNN) model. Here, the CNN model contains 4 convolutional layers, 4 max-pooling layers, and 2 fully connected layers, with the rectified linear unit (ReLU) activation are used for the convolutional layers in CNN. Here, Image augmentation purpose is to increase the size of the dataset and also reducing overfitting. System model is trained and validated using the training and testing datasets, respectively, with early stopping used to prevent overfitting. The performance of this system is evaluated using metrics such as F1 score, recall, precision and accuracy. Thus, results shows that the system model achieves a promising level of high accuracy for recognizing the three ocular diseases in the fundus images, demonstrating the deep learning models has high potential to aid in the diagnosis of ocular diseases.

#### **149. APPLICATION OF INFRARED THERMOGRAPHY TO DETECT DEBONDING OF ASPHALTIC LAYER ON BRIDGE DECK**

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In the recent past, the early, failure of asphalt pavement overlays on concrete bridge deck on newly constructed bridge in Goa has been noticed. The waterproofing membranes placed over the bridge deck has been recognized as a significant cause for this debonding. Potential reasons for the failure of

the asphalt overlay were thought to be due to poor adhesion between the waterproofing membrane and the asphalt wearing course, and the complex behaviour of the asphalt layer. By studying the exact behaviour of the asphaltic layer overlaid on waterproofing membrane under the action of dynamic loads and cyclic temperature variation, it is possible to understand causes of such failure. It is also possible to study the initiation of debonding and its effect on pavement. It is important to detect the initiation of debonding at the early stage so as to take preventive measure to avoid further spreading along and across the deck. The passive thermography can be used to identify the damages below the asphaltic layer caused by the debonding. In this study passive thermography pseudo experiments are conducted on a bridge deck overlaid with asphaltic layer to detect and identify damages in asphalt and base course. The damages were artificially created in the FEM model and passive thermography is simulated using industry standard software COMSOL. It is found that thermographs obtained clearly shows the presence and extent of damages in the Asphaltic layer. It is also observed that damages up to dept of 70mm from the road surface identifiable. This study helps early detection of debonding and hence enabling repair and replacement strategies at appropriate location without losing much time in locating hidden damages below the road surface which in turn increase the service life of asphalt overlays on concrete bridge decks in Goa.

## **150. IN-SILICO CHARACTERIZATION OF TF IN MOUSE AGEING GENES**

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Ageing is gradual loss of physiological, mental and functional integrity of an organism and is an unavoidable process. Various transcription factors are found in the various upstream regions. In this study the we found that ageing genes present in mouse can be classified into six common transcription factors based on their occurrence irrespective of their region using online available bioinformatics software.

## **151. STOCK PRICE PREDICTION USING DIFFERENT TECHNIQUES OF MACHINE LEARNING**

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This research paper presents a machine learning-based approach for stock price prediction. The proposed approach utilizes a long short-term memory (LSTM) neural network to model the time series data of stock prices and predict their future values. The LSTM network is trained on historical stock price data and various technical indicators, such as moving averages and trading volume, to

capture the complex relationships between different features of the data. The proposed approach is evaluated on a dataset of stock prices of several companies, and the results are compared with traditional time series forecasting techniques, such as ARIMA and exponential smoothing. The evaluation metrics used in the study include mean absolute error (MAE), mean squared error (MSE), and root mean squared error (RMSE). The proposed approach achieves an average accuracy of prediction over 90%, which is significantly higher than the prediction achieved by the traditional techniques. Overall, the results of this study suggest that the proposed LSTM-based approach is a promising technique for stock price prediction and can potentially be used as a tool for making investment decisions in the stock market.

## **152. SEISMIC PERFORMANCE OF G+10 RCC FRAME WITH BASE ISOLATION SYSTEM USING TIME HISTORY ANALYSIS**

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The most successful and extensively used strategy for shielding a structure against seismic forces is base isolation. The base isolation considerably decouples a structure from its base lying on the shaking earth, protecting the building's integrity by allowing it to withstand seismic forces without damage and protecting the lives of people. In the present study, an investigation is done to assess the seismic response of the structure with conventional fixed base and isolated base conditions. The isolation is configured with an elastomeric rubber isolator analysed and designed in accordance with the International Building Code, IBC: 2000. The analytical study is performed using ETABS software corresponding to G + 10 and building frame. The study is carried out by applying three-time histories, namely El-Centro, Uttarkashi, and Indo-Burma. The study reveals that the acceleration produced in the base-isolated structure is reduced in the range of 35–65% in comparison with the fixed base condition. Also roof velocities are 30-55% less for the isolated condition than the fixed base condition. In this paper roof displacement is also compared for fixed base and isolated base which reveals that roof displacements are 10-40% less for isolated base condition than fixed base. Thus, the study reveals that in case of mid-rise building (G+10) the base isolation effect is more prominently observed throughout all stories which remains almost constant. Energy demand in the Isolated Base Buildings is reduced to the tune of 10 to 80% showing the effectiveness of Isolation to keep the structure from deterioration.

## **153. WORK FAMILY CULTURE'S MODERATING EFFECT ON WORK FAMILY CONFLICT & FAMILY FRIENDLY PRACTISES AMONG KERALA NURSES**

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The effect of work family culture on family friendly practices and work family conflict is briefly summarized in this abstract. The nursing profession is known for its hard work schedules, long hours, & high emotional labour, which frequently cause work family conflict. To reduce this conflict and improve the nurses' ability to manage their professional & personal lives, organizations have introduced a variety of family friendly practices (FFPs). Additionally, the association between FFPs & work family conflict has been linked to work & family culture (WFC), which has been suggested as a possible moderator. The goal of this study was to look into the consequences of the link between FFP & work family conflict in the nursing profession on WFC. Data were gathered using a quantitative study approach from a sample of nurses working in various healthcare sectors using questionnaires. Validated scales for evaluating FFPs, WFC, & work family conflict were incorporated in the measurements. To investigate the direct and combined impacts of FFPs, WFC, & work family conflict, moderation regression analysis was used with SPSS AMOS. This study investigates Work Family Culture's Moderating Effect on Work Family Conflict & Family Friendly Practises Among Kerala Nurses. With high levels of work family conflict and difficulty in maintaining a healthy work-life balance in the nursing profession, understanding the role of organisational variables in moderating these conflicts is critical. This study's theoretical framework is based on the work-family interface literature, which recognises the bidirectional interaction among work & family. It is widely acknowledged that work & family conflict can have detrimental effects on the personal lives and job performance of nursing professionals. Implementing family-friendly practices, such as flexible scheduling, supportive leave policies, & childcare assistance, has been recognized as a way to alleviate work family conflicts and enhance nurses' well-being. The efficacy of these family-friendly practises, however, may be dependant on the establishment of a cooperative work family culture inside healthcare organisations. This indicates that a strong work family culture in the nursing industry will help to moderate the association between family friendly practises & work family conflict. A favourable impact of family friendly practises on minimising work & family conflict among nurses presumed to enhanced by a supportive work family culture. Organisations with a poor or hostile work & family culture, conversely may undercut the potential benefits of family friendly practises in reducing work family conflict.

#### **154. COMPARATIVE ANALYSIS OF MODELLING TOOLS FOR PARABOLIC ARCH TRUSSES: EVALUATING THE SUPERIORITY OF DYNAMO OVER AUTOCAD AND EXCEL**

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This research paper presents a comparative analysis of three different tools for modeling parabolic arch trusses: Dynamo, AutoCAD, and Excel. The study aims to establish Dynamo as the superior tool by evaluating its efficiency, precision, and advanced functionalities compared to AutoCAD and Excel. The analysis considers factors such as processing time, precision, flexibility, advanced visualization, collaboration tools, integration with structural analysis, data management, automation, design optimization, sustainability analysis, real-time feedback, and scalability. The findings conclusively demonstrate Dynamo's superiority, making it the preferred choice for architects and designers seeking accurate, efficient, and feature-rich modeling of parabolic arch trusses.

### **155. DESIGN OF CONTROL SYSTEM FOR 1.7MV TANDETRON ACCELERATOR BY PLC and SCADA**

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Tandetron Accelerator often used in nuclear power plants for ion beam exposure on the material for its character analysis, ion implantation and nuclear irradiation astrophysics research. The investigation of irradiation flaws in nuclear materials and experimental methodologies for developing effective solutions for material performance evaluation and optimization in radiation exposures done through Tandetron Accelerator. Any human error will harm the closed loop control system operation of Tandetron accelerators due to high voltage excitation. Certain interlocks must be built to overcome the situations and integration of sensor signals. A visualization design of interlock safety system is developed to monitor and control the 1.7MV Tandetron Accelerator Beam focussing on sample material using PLC and SCADA based on the Tilt angle, Azimuthal angle and Incident angle. The safety interlocks for tandetron accelerator programmed in ladder logic by PLC programming software in DELTA ISP 3.08 for monitoring the digital signals controlled by potentiometer. An attempt is made to develop Indigenous safety PLC – SCADA SIMATIC WinCC V7 based interlock control system for the Tandetron accelerator operation to monitor and regulate the various digital sensor signals.

### **156. A NOVEL GABOR FILTERING AND ADAPTIVE HISTOGRAM EQUALIZATION METHOD FOR IMPROVING IMAGES**

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The correct information may only sometimes be effectively conveyed by images due to various factors, such as excessively bright or dark lighting and low or high contrast. As a result, picture improvement has become an essential part of digital image processing. This proposed method aims to develop an algorithm for improving photos captured in dark environments. This letter presents a new picture-enhancing approach that combines median and Gabor filtering using the wavelet domain with histogram equalization working over a spatial domain. The novel proposed algorithm aims to improve image quality and visibility, making identifying essential details within the image easier. Further, the proposed technique's success is manifested by examining the produced photos contrast and brightness. The findings reveal that the suggested technique beats the other strategies for improving low-contrast photos.

### **157. THE IMPACT OF SOCIAL MEDIA USE ON MENTAL HEALTH OUTCOMES: EXPLORING COPING STRATEGIES AND SOCIAL SUPPORT AMONG YOUNG ADULTS**

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This study investigates the complex relationship between social media use, coping strategies, social support, and mental health outcomes among young adults. Existing research has demonstrated that excessive social media use can negatively impact mental health, but the role of coping strategies and social support in moderating this relationship remains unclear. The study aims to fill this gap by examining how coping strategies and social support influence the association between social media use and mental health outcomes among young adults. A comprehensive understanding of these factors is crucial for developing effective interventions to promote mental well-being. The study utilizes a mixed-methods approach, combining quantitative surveys and qualitative interviews, to gather data on social media use, coping strategies, social support, and mental health outcomes from a sample of young adults. The findings will contribute to the existing literature by providing insights into potential strategies to mitigate the negative impact of social media on mental health. This study's results will have important implications for mental health practitioners, social media platforms, and researchers, highlighting the importance of reducing social media use, promoting positive coping strategies, and enhancing social support to improve mental health outcomes among young adults who use social media.



## **158. DEEP LEARNING BASED OBJECT TRACKING IN FIELD HOCKEY USING FPGA**

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In VLSI, several transistors are integrated onto a single microchip. Enhancing or extracting information from images is known as image processing. Image processing algorithms may be quickly and adaptably implemented because of VLSI technology, particularly FPGAs as it is reconfigurable and do functions in parallel. Deep learning is a type of machine learning that makes use of multi-layered neural networks to learn from vast amounts of data. In hockey, deep learning algorithms like CNN improve player performance. Defending players, team tactics, ball speed, player movements, field and weather conditions, and game dynamics are all variables that affect performance. Deep learning algorithms are used to analyze player strategy, violence detection, missing person searches, item and weapon detection, replays, real-time videos, scores, and match reconstruction. The overall idea of our work's experimental setup consists of a camera connected to an SD card and a VGA interface with an FPGA. Using the SD card interface, the SD-card talks to the FPGA. The FPGA reads and stores image data from the SD card in its memory. After that, a convolutional neural network (CNN) is used to process the image. The FPGA is used to process the entire image. Finally, FPGA communicates with the VGA interface via a VGA connection in order to display the processed image on the monitor. In this work we try to implement CNN architecture in FPGA hardware. Our work is implemented in the Altera DE 1 FPGA board of the EP2C20F484C7N device, which belongs to the Cyclone II family.

## **159. DETECTION OF COPY-MOVE FORGERY USING SIFT AND BEBLID**

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In this modern digital era, mostly the information is in digital form. In recent years, altering digital content has been made accessible due to the availability of processing tools. When an image or video is modified maliciously, called tampering, it changes the contents truth and loses trust and integrity. So, there is a need to recognize such tampering to authenticate the validity of the content. This paper focuses on detecting copy-move forgery. Scale Invariant Feature Transform and Boosted efficient

binary local image descriptor build a descriptor and match the feature brute force matcher. The proposed method is tested on a publicly available dataset and found to have superior accuracy and time complexity compared to existing methods. The proposed approach also improves its robustness regarding geometric transformation and post-processing operations.

### **160. THE MODERATING EFFECT OF GENERAL COMPETENCIES ON CAREER SATISFACTION AND JOB PERFORMANCE: AN EMPIRICAL STUDY ON WEALTH MANAGEMENT FIRMS**

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In this paper, we emphasize the vital importance of employees competencies in creating a correlation between job performance and career satisfaction in wealth management companies. In the realm of career progression, job contentment is generally viewed as a personalized measure. In the context of professional skills, general competencies encompass a wide spectrum of proficiencies, including but not limited to prioritization, adaptability, creativity, problem solving, and teamwork. These skills are fundamental for succeeding in any work environment and are highly valued in the professional world. The central point of the discussion is to address the theoretical ambiguity and empirical inconsistency that exists in the present literature regarding the part of general competencies. To analyse the correlation between employee performance and career satisfaction, a research framework was employed that incorporates general competencies as an intermediary factor in wealth management firms. Based on a survey conducted among 90 employees working in wealth management offices in Cochin, it was found that general competencies play a crucial role between job performance and career satisfaction. Based on the survey results, it is evident that possessing general competencies is crucial for improving job performance and achieving career satisfaction within the wealth management sector. It is evident from the research that wealth managers can benefit greatly from providing a career advancement environment for their employees. This is because it leads to the development of a more skilled workforce, which in turn translates into better job performance and increased efficiency.

### **161. A REVIEW OF HOW EXCESS RAINFALL AFFECTS THE URBAN SEWERAGE SYSTEM AND PROBLEM SOLVING**

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The system of pipelines that transports sewage from its places of origin to a point of treatment and disposal includes pumping stations, appurtenances, and waste water or sewage. Older towns frequently have sewage and waste water collecting in the same pipes, however this practise is no longer designed or installed as part of modern sewerage facilities. Sewage must skip wastewater treatment plants during rainy days and be released directly into some water body because these facilities cannot handle enormous amounts of storm water and sewers overflow. The issue of wastewater or sewage backup cannot be ignored because these sewer overflows, which contain untreated domestic sewage, frequently cause water pollution issues, sewage backups, infections, and are particularly troublesome sources of environmental contamination. It requires immediate technical guidance, must adhere to accepted cleanup standards, and must take part in the communitys action plans for sewage maintenance. Additionally, look for some ways to deal with the serious problem of the impact of excessive rainfall on the sewer network. This essay examines how urban sanitation is affected by heavy rain and how, as a result, urban sanitation fails. The vast majority of earlier research have demonstrated the effects of excessive rainfall on centralised sewage systems in high-income settings. The heterogeneity of urban sanitation infrastructure and service systems, as well as the operational and management problems facing already-stressed systems, are not currently effectively reflected in research. One of the key components in ensuring an urban societys standard, comfort, and population health protection is urban drainage. Urban drainage should also serve to protect the environment. In order to manage wastewater and storm water effectively, it is necessary to come up with innovative, methodical solutions. Most local governments or municipalities have planned or installed sewer systems that, at the time of their creation, had certain desired capacities. econstruction, restoration, completion, or optimisation of the systems operation are required as a result of the geographic development of urban areas over time and the evolution of methods for resolving urban drainage issues. In densely populated metropolitan areas, initial run-off water must be separated from and purified. Retention of water with the potential for infiltration into the earth is the main strategy in this optimisation. The recipients water quality is directly impacted by the sewer system's efficient operation. Rainfall and the quality of its water are both impacted by climate change. Urban sanitation systems were under stress as a result of this. A variety of infrastructure, service, and system types are used in urban sanitation. Sanitary sewers, storm sewers, and mixed sewers are the three different types of sewers. All three of these sewer systems are crucial to ensuring that the waste we produce is transported and treated properly on a daily basis. However, in large urbanised areas, the use of the rainwater drainage system has an adverse effect on the sewerage systems functionality during times of heavy rainfall because the pipes and other sewer network components become overloaded. Rapid floods result from this.

## **162. BLOOD BANK MANAGEMENT SYSTEM**

Prof. Prajkta Dandavate

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An essential connection between a person in need of blood, a patient, and a blood donor is made possible by the online blood donation management system. The development of an autonomous blood system has proven crucial to preserving the lives of those who need blood in a variety of circumstances. Unfortunately, the current system has a number of flaws, including concerns with donor privacy that are evident right on the user interface. To reduce the difficulty of finding a blood donor during an emergency and to offer a high level of safety, it is advised that an online blood donation system be connected to the primary database that gathers and organizes data from blood banks. The necessary blood donation procedures are monitored and controlled by the suggested website. This entails locating potential donors, confirming their eligibility, arranging donation times, and monitoring the blood that has been collected. Also, the website offers a platform for donors to set up and manage their profiles, which contain details about themselves, their blood type, and their history of donations. Donor privacy is ensured by maintaining the confidentiality of this information and restricting access to only authorized staff. The online blood donation system offers a number of tools to help the general public learn about the value of blood donation and the steps involved in the donation process. It can save many lives and have a big impact on the healthcare sector by offering a centralised and effective blood donation management system.

## **163. TO STUDY THE EFFECT OF LATERAL LOADS ON RCC FRAME BUILDING WITH DIFFERENT MASONRY INFILLS BY CONSIDERING MASONRY INFILL AS A EQUIVALENT DIAGONAL STRUT ELEMENT**

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Burned clay bricks are traditionally used construction materials for partition wall in load bearing as well as in RCC building, nowadays Autoclaved aerated blocks (AAC) block are used on large scale as a construction material for partition wall in RCC frame. Masonry infill in load bearing structure is considered as a structural element since it transfers direct load but in case of RCC frame where masonry infill is used only as a partition wall its structural behavior is neglected most of the time. This paper primarily focuses on the effect of masonry infill on RCC frame when subjected to lateral loading and comparison between two types of materials that is burned clay bricks and (AAC) block by comparing response of buildings. For this modelling of masonry infill is done as a equivalent

single diagonal strut element in relevant computing software and response spectrum analysis is performed to analyze the buildings.

## **164. PROGRESSIVE COLLAPSE ANALYSIS OF RC SHEAR WALL BUILDING**

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This research paper presents a progressive collapse analysis of sixteen storey RC shear wall building under extreme loads is discussed. The progressive collapse analysis of RC shear building is evaluated under various column removal conditions. Linear static analysis and linear dynamic analysis are carried out for different column removal conditions. Change in demand capacity ratio of building is also identified. As load combinations are different, changes are found in collapse pattern. The outcome of this study has provided reference for progressive collapse prevention designs of high rise RC shear wall building. This study also aimed to understand the progressive collapse process and to discover new methods and ideas for designing structures that would prevent any type of failure.

## **165. U-NET ARCHITECTURE FOR THE DETECTION AND CLASSIFICATION OF POLYP IN MEDICAL IMAGES**

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The analysis of colonoscopy images is highly advantageous in the early detection of colorectal cancer. Automated tissue segmentation is a crucial tool for enhancing the accuracy and robustness of lesion

identification and classification, which are among the most relevant clinical target applications. The application of computer vision and machine learning methodologies has facilitated the automation of video colonoscopy analysis, leading to enhanced objectivity and improved polyp detectability in segmentation. The present investigation delineates a technique for polyp segmentation that was devised for the polyp segmentation challenges of the Endoscopic vision central venous catheter--clinic database (CVC-ClinicDB). The method is founded on a U-shaped encoder-decoder network (U-Net) and incorporates a support vector machine – radial basic function (SVM-RBF) classifier. The primary contribution of the paper involves an extensive evaluation of the proposed architecture. This evaluation is conducted by subjecting the architecture to established image segmentation benchmarks and employing diverse metrics. Additionally, cross-validation is performed on the CVC- ClinicDB training dataset. The article provides a comprehensive account of multiple research that were conducted to investigate network configurations, design parameter values, data augmentation techniques, and polyp characteristics. The results indicate the significance of employing data augmentation techniques and the meticulous consideration given to the selection of the method's design parameters. The proposed methodology yields state-of-the-art results while operating at near real-time speeds.

## **166. HUMAN MACHINE INTERFACE FOR REALIZING DNA BASED BOOLEAN OPERATIONS AND COMBINATORIAL OPTIMIZATION PROBLEMS**

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The biological DNA (Deoxyribose Nucleic Acid) is being increasingly considered as an alternative processor to asilicon chip. DNA-based logic circuits are an attractive alternative to silicon-integrated circuits in specific control applications. Developing models for Boolean operations using DNA strands requires computer science and biochemistry expertise. However, there is a vast gap between the user who needs computation using DNA and the various DNA operations to be carried out with the help of Microarray, Microtiter plate and their respective Reader. In this paper, an HMI (Human machine interaction) is modelled for solving Boolean logic circuit and combinatorial optimization problems. An HMI is designed with the digital screen as the interface between the user and the bio-operations in the wet lab. The interface transforms the input from the user to DNA strands and the bio-operations to be carried out to achieve the desired solution. An attempt is made in this paper to design HMI for getting the inputs, followed by the DNA encoding of the inputs. The various bio-operational steps to be carried out in the wet lab and finally to read the output from the Microarray or Microtiter plate Reader and to be viewed in the digital screen by the user.

## **167. SECURING BIOMETRIC INFORMATION USING BLOCK CHAIN**

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Biometrics, with its distinctiveness to each independent, has been modified as a security attestation function via way of means of number of institutions. This kind of biometric statistics are processed into templates which might be stored on the databases, and a government concentrates and manages those databases. This method of preserving biometric statistics, or in our case of fingerprint template, is uneven and has three types of main security protection attacks, together with faux template input, template change or removal, and route of the interception via way of means of a malicious attacker. In this paper, we stable an encrypted fingerprint template via way of means of a symmetric peer-to-peer community and symmetric encryption. The fingerprint is encrypted via way of means of the symmetric key set of rules: Advanced Encryption Standard (AES) set of rules after which is uploaded to a symmetrically allotted to distributed storage device, The hash of the template is stored in a decentralized block chain. By acquiring the proposed device which supports template hashing which leads to cost- powerful and coherent. The experimental results illustrate that the proposed tool secures the fingerprint template via means of encryption, hashing, and decentralization.

## **168. APPLICATION OF MACHINE LEARNING IN CYBER SECURITY ANDROID MALWARE DATA SET**

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Computers, servers, mobile and electronic devices and networks are protected from the malicious attacks are called cyber security. The internet is a worldwide communication and it is used to access the data resources. It can able to access as private, public, academic and government networks. Internet is managed by IANA (Internet Assigned Numbers Authority). Process of scanning the computer is called as the malware detection. Multiple tools and approaches are used in malware detection. Android malware dataset has been taken for the observation. There are Totally 50 attributes have been used. All attributes correlation has been measured and above 0.5 correlation attributes has been taken for building the model. Totally 15 attributes have been used for building the model. Flow duration is the attribute which has been taken to predict the value. In the second attribute prediction,

total\_backward\_prediction have been taken. Here the attribute has been selected based on the attribute selection with ranking. Models have been built with various techniques like linear regression and SMOReg. The models have been developed with above 0.9 correlation coefficient. Hence the model is acceptable.

## **169. ARTIFICIAL INTELLIGENCE-BASED HUMAN EMOTION DETECTION USING DEEPPFACE**

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Human-machine interaction technology is becoming more popular, and machines must comprehend human movements and expressions. When a machine recognizes human emotions, it gains a greater understanding of human behavior and increases the effectiveness of work. Text, audio, linguistic, and facial movements may all convey emotions. Facial expressions are important in determining a person's emotions. There has been little research done in the topic of real-time emotion identification utilizing face photos and emotions. Using the Artificial Intelligence-based deepFace approach, the suggested method recognizes real-time feeling from facial pictures and live emotions of persons. The proposed module extracts the facial features from an active shape deepFace model by identifying 26 facial points to recognize the human emotions. This approach recognizes the emotions of frustration, dissatisfaction happy neutral, and wonder. The suggested technology is unique in that it implements emotion identification in real-time, with an average accuracy of 94% acquired from actual human emotions.

## **170. PRIORITIZING CRITERIA FOR URBAN QUALITY OF LIFE AND HAPPINESS IN INDIAN CITIES: A SWARA-BASED METHODOLOGY**

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This research presents a SWARA-based approach to analyzing and evaluating urban quality of life and happiness in Indian cities. The SWARA (Step-wise Weight Assessment Ratio Analysis) method is used to assess the relative importance of several urban quality of life and happiness parameters. The study also includes an expert survey to gain professional opinion on urban quality of life and happiness. The obtained data is examined using the SWARA method, which ranks the relevance of urban quality of life and happiness elements. The results of the analysis highlight important conclusions on how to prioritize criteria. The most important aspect for citizens is housing, followed by income and employment prospects, health and wellness, and education. The importance of transport and social circumstances is lower, indicating areas that need improvement. The study also shows how certain criteria are interdependent. Urban happiness is highly correlated with income and employment prospects, while wellbeing and health are tied to leading a healthy lifestyle. These results highlight the significance of taking into account individuals' overall well-being when designing and building towns. The study also recognizes the relevance of government and governance-related



variables in UQOL, including sanitation and hygiene, public safety, and governance itself. While their ranks may be lower, their impact on city should not be underestimated. The proposed technique provides a valuable tool for policymakers and urban planners to identify regions that need improvement and prioritize measures that can increase urban residents' quality of life and happiness. The study's findings can be used to drive urban development strategies and policies in India and other emerging countries facing comparable difficulties.

### **171. ANALYSIS OF BM3D DENOISING PERFORMANCE WITH DIFFERENT NOISES: A COMPARATIVE STUDY USING MULTIPLE EVALUATION METRICS**

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Denoising techniques play an important role in enhancing the visual quality of images that have been affected by noise. Among the numerous denoising approaches, Block- Matching and 3D Filtering (BM3D) has been getting a lot of attention as a result of its ability to successfully remove noise while keeping image information. In this paper, we give an in- depth evaluation of BM3D's denoising performance using different types of noise on the widely used Leena image, and analyse the effectiveness by applying several metrics. We apply different noise types, such as Gaussian noise, localvar noise, Poisson noise, salt and pepper noise, and speckle noise. We employed a variety of objective criteria, including both conventional and perceptual assessment measures, to determine the performance of the denoising process of BM3D. Traditional measures such as Peak Signal-to-Noise Ratio (PSNR), Structural resemblance Index (SSIM), and Mean Squared Error (MSE) were used to analyse the integrity and resemblance of the denoised image to the original ground truth. Perceptual measures such as Perceptual Index (PI) and Visual Information Fidelity (VIF) were also used to assess the visual quality and preservation of crucial image characteristics. The thorough assessment results proved the BM3D algorithm's superiority in terms of denoising efficacy on the Leena image for handling different datatypes. All of the measures studied for BM3D had greater PSNR, SSIM, and lower MSE values. Furthermore, BM3D got high perceptual evaluations, with significantly enhanced visual quality and detail preservation. The outstanding performance of BM3D across several objective and perceptual measures validates its potential for a wide range of image denoising applications, reaffirming its reputation as a dependable denoising technology.

### **172. ASSESSMENT OF HORIZONTALLY CONNECTED HIGH-RISE BUILDINGS UNDER EARTHQUAKE LOADING**

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One of the key elements in the structural design of the structures is how they will react to lateral stresses brought on by earthquakes. For many reasons, designers are connecting the adjacent buildings horizontally. Such horizontal connections have the potential to change the structure's behavior. This results in restrictions on the application of design guidelines. According to design-code criteria, this study evaluates the behavior of connected high-rise structures under earthquake loads in detail. Also observed how the position of the sky-bridge affects the produced reactions. Different ground-motion data with various peak ground accelerations were used to excite the building configurations. The positioning of the sky bridge had a subtle but significant impact on certain of the building structures' expected dynamic load-induced reactions.

### **173. NON-LINEAR ANALYSIS OF STEEL FIBER REINFORCED PRE-STRESSED CONCRETE T-BEAM**

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This paper presents an assessment of the flexural behavior of five prestressed high strength concrete beams containing steel fibers investigated using three-dimensional nonlinear finite elemental analysis. The main parameters varied in the tests were: fiber volume fractions (0%, 1.0% and 2.0%), fiber location (full depth and partial depth over full length). A three-dimensional nonlinear finite element analysis was conducted using ANSYS 5.5 general purpose finite element software to study the flexural behaviour of both fully and partially prestressed fiber reinforced concrete beams. Influence of fibers on the concrete failure surface and stress-strain response of high strength concrete and the nonlinear stress-strain curves of prestressing wire and deformed bar were considered in the present analysis. In the finite element model, tension stiffening and bond slip between concrete and reinforcement (fibers, prestressing wire, and conventional reinforcing steel bar) have also been considered explicitly. A comparison of results from analysis on all 5 specimens confirm that, inclusion of fibers over a partial depth in the tensile side of the prestressed flexural structural members was economical and led to considerable cost saving without sacrificing on the desired performance.

### **174. QUANTUM MACHINE LEARNING: EXPLORING THE FUNDAMENTALS OF QUANTUM COMPUTERS AND THEIR APPLICATIONS IN SUPPORT VECTOR MACHINES**

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Quantum machine learning is one of the most fascinating topics which is at the intersection of two of the most wanted research areas-quantum computing and classical machine learning. To train a classical computational model, we required a large amount of data in which it is reaching the limits of the computational speed of a computer. In such a scenario, the quantum computation can aid in continuing training with huge data. Quantum machine learning looks to formulate learning algorithms faster than their classical contradictions. Classical machine learning is about trying to find patterns in data and using those patterns to predict further events. Quantum systems, on the other hand, produce a typical pattern that is not producible by classical systems, thereby postulating that quantum computers may overtake classical computers on machine learning tasks. How the principles like quantum entanglement, dual principle, quantum coherence, and qubits play key roles in the working of quantum computers to implement algorithms like quantum support vector machines.

### **175. DESIGN AND ANALYSIS OF ENERGY-EFFICIENT RESIDENTIAL BUILDINGS USING BIM**

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Prior to the introduction of Building Information Modeling (BIM), the design of energy- efficient buildings faced major challenges which include lack of coordination, limited collaboration, ineffective design iterations, and limited information sharing. BIM provided a digital platform that enabled integration across various disciplines and incorporates information on the architecture, structural design, mechanical systems, and electrical systems, enabling stakeholders to efficiently analyze and optimize energy performance. Energy- efficient design procedures have been greatly aided by BIM's integration with energy analysis software and its capacity to simulate and optimize building performance. BIM enables architects to create a 3D model of the building at the beginning of the design process, aiding in determining the potential of solar energy, natural lighting, and other renewable energy sources. BIM tools make it easier to create detailed energy models, which can be used to estimate the buildings energy usage and potential savings with greater accuracy. It can also be used to track the buildings actual performance in terms of energy use and occupant comfort. In this study, BIM software was used to simulate the energy performance of a residential building, which was modeled in Autodesk Revit software and exported to the EnergyPlus programme. Energy consumption was reduced by 25% as a result of the design and construction of energy-efficient homes in a residential area using BIM.

### **176. ADVANCES AND CHALLENGES IN MULTILINGUAL OCR FOR INDIC SCRIPTS: A COMPREHENSIVE LITERATURE REVIEW**

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This literature review article examines a number of references from 2004 to 2022 to give a thorough overview of Indic Optical Character Recognition (OCR) technology. The review includes studies from numerous conferences and journals on subjects like script identification, error detection and correction, benchmarking, post-processing methods, feature selection, clustering-based classification, multilingual script recognition, and deep learning techniques. The studies under examination stress the value of Indic OCRs in raising the accuracy of text recognition for languages including evanagari, Telugu, Malayalam, Urdu, and Odia. The difficulties with Indic OCRs, such as handling multilingual scripts and poor script identification, are also explored. The review also emphasises how wordnets and sequence-to-sequence models are integrated with transfer learning, font diversity, data augmentation techniques, and other technologies in Indic OCR systems. The results direct future research towards more precise and reliable solutions by giving researchers and practitioners useful insights into the developments, methods, and difficulties in Indic OCRs.

### **177. NON NEGATIVE MATRIX FACTORIZATION BASED SINGLE CHANNEL SOURCE SEPERATION**

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The speech recognition system has, in fact, acquired a large amount of importance in a variety of applications, including speech translation, robotics, and security. However, due to the existence of noise and source mixing during signal acquisition, these systems frequently confront problems, which can have a negative impact on their overall performance. Utilizing in an effective manner the temporal dependencies of signals for a period of time that is longer than the duration of a single time-frame is one of the primary obstacles that cutting-edge solutions need to overcome. In order to find a solution to this problem, the authors of this study present a new model that makes use of non-negative matrix factorization (NMF) modeling. This technique makes use of the scattering transform, which entails the implementation of wavelet filters and pyramid scattering in order to compute the sources and reduce the amount of unwanted signals. After an estimation of the signals or sources has been made, a source separation algorithm is then developed utilizing an optimization process that is based on training and testing methodologies. By computing performance measurement metrics, the existing methodologies and the suggested approach are compared with one another. The performance of the suggested strategy is demonstrated to be superior by these metrics when compared to the performance of other methods. It suggests that the model utilizing NMF and scattering transform successfully handles the difficulty of properly leveraging temporal dependencies in signals that are greater than a single time-frame, which ultimately results in better speech recognition system performance.

### **178. INVESTIGATIONS ON MICROSTRUCTURE AND COMPRESSIVE STRENGTH OF ALUMINIUM METAL FOAM**

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The aim of this research work is to fabricate aluminium metal foam with the help of blowing agents like  $\text{CaCO}_3$  and  $\text{MgCO}_3$ . Closed-cell aluminium metal foam samples were prepared using the Powder Metallurgy (PM) route. A compaction load of 45-100 kN was applied to compact the mixtures of aluminium powder and blowing agents to form the green compacts using a die and punch assembly. The green compacts were subsequently sintered in a muffle furnace at 600-800 °C. The compression test, optical microscopy, and scanning electron microscopy were performed on the specimen to investigate the fabricated metal foams. From SEM analysis it was observed that the pore size of samples prepared using  $\text{CaCO}_3$  was 165-170  $\mu\text{m}$  and the pore size of sample prepared with  $\text{MgCO}_3$  was 150  $\mu\text{m}$ . On close examination of the microstructural images, it was observed that foams produced using  $\text{MgCO}_3$  blowing agent were uniform as compared to  $\text{CaCO}_3$ . The compressive strength of samples fabricated using both the blowing agents was approximately the same i.e. 80 MPa. On comparing these samples with aluminium base metal compressive strength comes out to be 43.807 MPa, which was almost half the fabricated metal foams. This shows blowing agent Al samples has almost double the compressive strength than Al base metal. Fabricated metal foams showed enhanced compressive strength (81.30 % improvement) than the aluminium base metal which may be attributed to micro-sized pores in the matrix.

## **179. DATA POISONING ATTACKS ON MACHINE LEARNING MODEL RELIABILITY**

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Data poisoning attacks on ML model reliability, is to identify poisoned attacks in a data set and support clinicians for their future study. Healthcare data include a large amount of medical data gathered from various healthcare data sources. The healthcare data sets need to be always kept secured, since they can be used further by the doctors or researchers. The chosen healthcare data sets are first run through an ML algorithm called Bayesian Neural Network, which determines the datasets accuracy. The data sets accuracy will be used to predict whether the data set is poisoned or not. Succeeding that, the dataset is pre-processed, and then the three algorithms named Logistic Regression, Support Vector Machine and Random Forest are used. The highest accuracy producing algorithm is chosen as the best. The best algorithm is chosen as Support Vector Machine due to its high accuracy rate of about 0.89% is then used to help specialists in the further study of the patients health condition.

## **180. DESIGN AND IMPLEMENTATION OF AN SPI TO I2C BRIDGE FOR SEAMLESS COMMUNICATION AND INTEROPERABILITY BETWEEN DEVICES**

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The SPI to I2C Bridge serves as a communication interface, enabling smooth data exchange between SPI and I2C devices. Acting as an intermediary, this bridge facilitates the conversion of data frames and protocol translations between the two distinct serial communication protocols. The bridge consists of three key components: a SPI master module, a protocol conversion unit (PCU), and an I2C slave module. The SPI master module, typically implemented using a controller, acts as the sender, while the I2C slave module represents the receiver, typically peripheral devices. The PCU plays a crucial role in converting SPI signals and data formats into their I2C counterparts, ensuring seamless compatibility and communication between the devices. To validate the bridges performance and functionality, simulation and synthesis are conducted using appropriate software tools like EDA Playground and verilog. By employing the SPI to I2C Bridge, seamless communication and interoperability between SPI master devices and I2C slave devices are achieved. This solution offers an efficient and versatile approach for integrating peripherals that utilize different serial communication protocols.

## **181. THE EFFECT ON STORY DISPLACEMENT AND STORY SHEAR FOR DIFFERENT ARRANGEMENTS OF SHEAR WALLS**

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Structural engineers have always been concerned about earthquakes. Earthquakes not only harm buildings but also have a big impact on peoples lives. Structural members such as Shear walls are used to resist the earthquake force. Shear walls are structural walls made of reinforced concrete and serve as an important component of an earthquake- resistant building. It is crucial to properly assess the seismic response of the structure since the characteristics of these seismic shear walls heavily influence how the buildings respond. The major goal of the current study is to find a shearwall positioning solution for multi-story (10 storey) residential buildings . Four distinct models have been used to examine the effectiveness of shear walls. The first model has a bare frame structural system, whereas the remaining three models have dual structural systems. The method of analysis used is non-linear Time History Method. Ground motion data of four different earthquakes is used. The analysis is performed using the ETABS software tool. It was found that rearranging the shear walls significantly impacted the storey shear, and roof level displacements.

## **182. ECG & PPG BIO-SIGNALS-BASED AI-BASED STROKE DISEASE PREDICTION SYSTEM**

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Aggressive primary prevention & early identification about prognostic indications are essential for preventing stroke sickness since it frequently causes death either severe disability. Stroke infections brought about by ischemic either hemorrhagic stroke should be treated when achievable against thrombolytic either coagulant treatment. Recognising stroke precursor symptoms in real time is the first step in seeking competent treatment from a medical facility within an adequate treatment window. Each person has their own unique set regarding symptoms. However, prior research has primarily focused on identification regarding stroke prediction markers rather than development regarding acute therapy either clinical treatment recommendations following a stroke. Late examination has focused significantly on utilization regarding picture investigation towards recognize & conjecture prognostic signs in stroke patients using imaging methods like figured tomography (CT) either attractive reverberation imaging (X-ray). These methods have drawbacks like lengthy testing times & high costs, as well as difficulty regarding continuously recognizing them from start. We present an AI-based method for anticipating & semantically interpreting stroke prognostic side effects in elderly patients using electrocardiogram (ECG) & photoplethysmography (PPG). We designed & implemented an ensemble architecture that combines CNN & LSTM towards predict stroke illness while walking. At a sample rate regarding approximately 1,000 Hz per second, biosignals were recorded while walking from three electrodes surrounding ECG index finger for PPG. This strategy considers straightforwardness against which more seasoned individuals can wear bio-signal sensors. Real-time forecasts for elderly stroke patients performed satisfactorily in terms regarding accuracy & performance.

## **183. SUSPICIOUS ACTIVITY DETECTION AND ALERT SYSTEM USING RASPBERRY PI**

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An important branch of computer science called computer vision processes digital photos and movies to increase the intelligence of machines. Activity recognition, which automatically classifies an agent's behavior, is a significant use of computer vision. Uncovering a person's actions through a series of observations while considering many difficult contextual conditions is the goal of the key application of suspicious activity recognition. The internet tells the user or commando when the surveillance systems motion detection and tracking are activated.

#### **184. DESIGN OF LOW POWER AND MINIMIZED AREA OF ALU USING M-GDI TECHNIQUE AND DECODER**

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In the field of electronics, power dissipation and circuit area pose significant challenges. A 2T XOR gate is designed which is used for the Full adder, and subtractor circuits used in the ALU. The 2T XOR gate is designed to consume less power and provide improved performance compared to traditional XOR gates. By incorporating this gate into the ALU design, power efficiency and overall circuit performance can be enhanced. Additionally, a decoder is employed to decode control signals and direct the flow of data within the ALU. The decoder plays a vital role in selecting specific operations and managing data paths based on the input instructions. The simulation results are carried out using Tanner EDA. The findings indicate that the suggested design exhibits reduced power consumption by utilizing a smaller quantity of transistors.

#### **185. PREDICTION OF PARKINSON'S DISEASE A MACHINE LEARNING APPROACH**

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Impulse control disorders (ICDs) are frequent non-motor symptoms occurring during Parkinson's disease (PD). The objective of this study was to estimate the predictability of the future occurrence of these disorders using longitudinal data, the first study using cross-validation and replication in an independent cohort. Methods: We used data from two longitudinal PD cohorts (training set: PPMI, Parkinson's Progression Markers Initiative; test set: DIGPD, Drug Interaction with Genes in Parkinson's Disease). We included 380 PD subjects from PPMI and 388 PD subjects from DIGPD, with at least two visits and with clinical and genetic data available, in our analyses. We trained three logistic regressions and a recurrent neural network to predict ICDs at the next visit using clinical risk factors and genetic variants previously associated with ICDs. We quantified performance using the area under the receiver operating characteristic curve (ROC AUC) and average precision. We compared these models to a trivial model predicting ICDs at the next visit with the status at the most recent visit. Results: The recurrent neural network (PPMI: 0.85 [0.80 – 0.90], DIGPD: 0.802 [0.78 – 0.83]) was the only model to be significantly better than the trivial model (PPMI: ROC AUC = 0.75 [0.69 – 0.81]; DIGPD: 0.78 [0.75 – 0.80]) on both cohorts. We showed that ICDs in PD can be predicted with better accuracy with a recurrent neural network model than a trivial model. The improvement in terms of ROC AUC was higher on PPMI than on DIGPD data, but not clinically relevant in both cohorts. Conclusions: Our results indicate that machine learning methods are potentially useful for predicting ICDs, but further works are required to reach clinical relevance.

## 186. IMAGE RECOGNITION USING PRINCIPAL COMPONENT ANALYSIS

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Research And development in the field of computer science are trending with image and video processing as latest update on research. Image processing is any form of signal processing for which the input is an image, such as photographs or frames of video; The result of image being processed

can be a image or a set of parameters selected for the result or image required. Video processing is a particular case of signal processing, where the input and output signals are video files or video streams. Video processing techniques are used in television sets, VCRs, DVDs, video codecs, video players and other devices. In This paper, We present Image/Video processing elements. We also present the current technologies related to Image and Video Processing. This review paper aims to provide researchers and practitioners with a comprehensive understanding of the role of PCA in face recognition systems. By critically examining the strengths, limitations, and recent advancements in PCA- based approaches, it offers insights for improving the accuracy, robustness, and efficiency of face recognition systems in practical applications.

### **187. STUDY ON THE PREPARATION AND PROPERTIES OF NEW GROUTING MATERIAL FOR WALL TIE GROOVE PACKING IN ALUMINIUM FORMWORK SYSTEM BUILDINGS**

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Aluminium formwork systems buildings have various components to execute the work with proper support for alignment and stability of shuttering while this activity of providing proper support is achieved with an important component called wall tie which is placed in between the wall horizontally tightened with the pin and wedge. Casting concrete and removal of aluminium formwork panels leaves wall tie holes or grooves at regular intervals. These wall tie grooves have to be packed to complete the structure work and the packing or grouting material currently getting used in the construction industry is manufactured by the vendor and sold to the principal contractor whereas this study deals with the study and properties of grouting material and also preparing new grouting material which can be easily made in a construction site with readily available materials which are already getting used for different activities also satisfies the requirement as per Standards. This study also deals with the material preparation with required properties for grouting the wall tie grooves in aluminium formwork system concrete structures stating the tests which shows the quality of the prepared grouting material. The main motto of this study is to prepare the wall tie groove packing material in the site itself with available materials without getting the same from the vendor which costs high and also increases the total project value. Preparing the locally available materials in the site without spending extra cost in preparing the wall tie groove grouting material reduces the cost of the activity if the volume of the material used is high. Therefore this study can be applied to high-rise structures where there will be a large number of wall tie grooves in the concrete structure.

### **188. ON ARITHMETICAL TRAITS OF DOUBT FUZZY T-IDEALS BENEATH THE NORMALIZATION OF T-ALGEBRA**

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In this paper, a 4:1 multiplexer with a 3T-based xor\xnor logic gate is proposed using 25-nanometer technology having high power gain and less propagation delay. The proposed circuits are highly optimized in terms of power consumption and time delay due to low output capacitance and low short-circuit power dissipation. The Micro Wind EDA simulation tool is used to design the cascade logic xor\xnor circuit. The proposed circuits are investigated for different parameters such as the supply voltage, threshold voltage, output capacitance, internal noise, and propagation delay.

## **192. DEVELOPMENT OF A CAREER-GUIDANCE EXPERT SYSTEM**

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This paper deals with designing and developing a rule-based expert system for career selection. A student's career choice is complicated and depends on various elements, including their interests, abilities, personalities, and social circle, as well as their family, friends, and school. This system interacts with users with the simple English language and psychosomatic tests used to assess students' vocational interest, general mental ability, problem-solving ability, and records. The present system is designed to provide results based on if/then rules, which are extracted from experts in career counseling. Tools such as Angular JS, Node.js, express.js, and MySQL were used to develop the expert system using the languages HTML, CSS, JavaScript, and typescript. The front end of the ES was developed using AngularJS, and the back end and server side was created using Node.js, MySQL, and Express.js. The expert system's inference engine and knowledge base were developed using json-rules-engine, the node package manager available on GitHub. As a pilot study, the system was used by 50 participants to determine its efficiency in accessibility, ease of use, and user experience about the system. Results show that more than 80 percentage participants were highly satisfied with the system. The developed system aims to enhance user experience and accessibility and is simple.

## **193. GENERATING CLOUD MONITORS FROM MODELS TO SECURE CLOUDS**

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Private clouds are widely recognized as a crucial component in the process of transforming data centers within various companies. These clouds are exclusively built for the internal use of a single organization. Consequently, creating secure private cloud environments that cater to a substantial number of users poses a significant engineering hurdle. Typically, cloud computing services provide REST APIs (Representational State Transfer Application Programming Interfaces) to enable consumers to access their services. The REST architectural style ensures that each piece of information is accessible through a unique URI, resulting in a considerable number of URIs that can interact with the system. This paper introduces a cloud monitoring framework that facilitates a semi-automated approach to monitor the adherence of a private cloud implementation to its functional requirements and API access control policy. Our approach utilizes UML (Unified Modeling Language) models combined with OCL (Object Constraint Language) to specify the behavioral interface of the cloud implementation, including security constraints. The behavioral interface of the REST API provides detailed information about the available methods and their pre- and post-conditions. Traditionally, these conditions are expressed as textual descriptions associated with the API methods. However, our framework leverages the Design by Contract (DbC) framework, enabling us to define verifiable contracts for both security and functional requirements.

#### **194. TIME ORIENT ACCELERATION GAIT PATTERN (TOAGP) BASED FREEZING OF GAIT (FOG) PREDICTION ON PARKINSON PATIENTS USING DEEP LEARNING**

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The problem of predicting Freeze of Gait (FoG) on Parkinson diseased patients has been well studied. There exists number of approaches in predicting FoG, which uses sensory features, EEG data and so on. However, the methods suffer to achieve higher performance. To handle this issue, an efficient Time Orient Acceleration Gait pattern based FoG prediction model (TOAGP-FoG) is presented in this article. The model designed to attach accelerometer sensors at different ankle and joints of the body. The sensor signals are recorded at different gait movement in long term. The sensory signals are passed to the central data server which tracks the movement signals. With the time variant signals stored by the model, the method generates Acceleration Gait Pattern with number of features. At each movement, the method analyzes the patterns to compute FOG Risk Support (FoGRS) towards various gait movement. The FoG Risk Support is measured according to the movement forces produced by the patient for various gait movement in different time stamp and computes minimum gait force to be produced. Based on the FoGRS value, the method performs FoG prediction. The proposed method improves the performance of FoG prediction with higher accuracy.

#### **195. AN EFFECTIVE CONTENT BASED IMAGE RETRIEVAL USING DEEP BELIEF NETWORK (DBN)**

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Content-based image retrieval (CBIR) uses image content features to search and retrieve images from a large database. The advancement in technology in recent days has influenced our daily life and the way people communicate with each other. The technology has also made impact on how people store and process data. To maximize the usage of widely available digital media people have to shift from traditional methods to sophisticated techniques. As people are able to capture and use images easily, need to have a mechanism which retrieves accurate images corresponding to the query. Here the deep belief network (DBN) method of deep learning is used to extract the features and classification and is an emerging research area, because of the generation of large volume of data. The proposed method is tested through simulation in comparison and the results show a huge positive deviation towards its performance.

## **196. SMART CROP YIELD RECOMMENDATION MODEL IN AGRICULTURE FARM PRODUCTION USING MACHINE LEARNING AND IOT TECHNIQUES**

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Smart agricultural monitoring is the use of cutting-edge technology to manage all elements impacting plant and lowering crop yield quality. The main objective of the smart crop monitoring and management is to guarantee farmers optimal productivity. Additionally, the market for worldwide smart crop management is expanding continuously as a result of the rising need for smart agricultural techniques. IoT based smart crop recommendation system is proposed here to help the farmers with the recommended crops to cultivate based on dynamic situations. The methodology used in this system is that the farmer has to enter the details of the conditions around the field. Once the data is entered into the system will be analyzed. This will predict the state of environmental conditions and predict the crop that is suitable under these situations to give more yields. The web application is also built here for the farmer to analyze the information regarding the crops and to generate those reports. K-Nearest Neighbor (KNN) algorithm is used to find better crop through various conditions. At last, the farmer gets the better results based on his conditions around the farm field to plant the crop which is appropriate to those conditions. The proposed system helps for huge number of farmers by using IOT devices and web applications for smart irrigation.

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