Proceedings of the International Conference on Sustainable Computing and Data Communication Systems (ICSCDS-2023)
DVD Part Number: CFP23AZ5-DVD; ISBN: 978-1-6654-5579-4

A Framework for Design and Development of Message sharing using Open-Source Software

Shaik Khaleelullah
Asst.Professor
Dept of IT
Vignan Institute of Technology and Science
Hyderabad, India
khaleel1245@gmail.com

Dr. Prabhakar Marry
Asst.Professor
Dept of IT
Vignan Institute of Technology and Science
Hyderabad, India
marryprabhakar@gmail.com

P.Naresh
Asst.Professor
Dept of IT
Vignan Institute of Technology and Science
Hyderabad, India
pannanginaresh@gmail.com

P.Srilatha
Asst.Professor
Dept of IT
Vignan Institute of Technology and Science
Hyderabad, India
psrilatha191@gmail.com

G.Sirisha
Asst.Professor
Dept of IT
Vignan Institute of Technology and Science
Hyderabad, India
sirishag428@gmail.com

C.Nagesh
Assistant Professor
Dept of CSE
Srinivasa Ramanujan Institute of Technology
Anantapur, India
nageshc.cse@srit.ac.in

Abstract- One of the most well-known and cost-effective marketing strategies is SMS marketing. Despite smartphones' superiority, 92% of the world's population, including those living in areas without internet access, can access SMS.SMS marketing involves simultaneously sending messages to a large number of people. SMS Marketing" is a kind of permission-based completely hobby, and you can't buy a cell phone or smartphone. You should allow SMS to be sent. Keywords are the easiest way to attract and gather customers for your SMS provider. Keywords are short, easy-to-remember phrases that help potential customers benefit from promotions by inviting them to your committed mobile number via SMS. If they respond, they will be sent to the client database that is managed by the internet-based entirely platform. For guidance, our communication platform and membership control machine sync. Utilizing cutting-edge, most well-known and potent forms of communication, you can improve sales, service, operations, and client retention. You could send messages to many people at once using this platform. In order to automate personalized text message responses tailored entirely to your company's requirements, it routinely collects membership information and routinely creates an opt-in SMS database. boom. It has the capability of automating SMS marketing and advertising. Our current machine instructs clients to enter an Excel spreadsheet and add the contacts they wish to ship. The proposed machine sends text messages at predetermined times and routinely retrieves information from client databases. By including hyperlinks in SMS messages, and also upload the cap potential to direct customers to Facebook pages, mobile apps, photos, websites, YouTube videos, or other content.

Keywords: *Open-Source Software, Message Passing, Open-Source Assessment*

I. INTRODUCTION

In recent years, open source software development has become a hot topic, with an increasing number of organizations and individual developers participating. The open-source software development communities GitHub and Source Forge are two examples. There are more and more tasks that are similar as open supply tasks increase. Project nice is erratic. Customers and developers of software frequently have trouble determining which open source projects are mature or extremely attractive. It is critical and urgent to address how to locate mature tasks in open supply. Open source software [1] adulthood evaluation versions are used in current academic research to investigate mature open source tasks. However, most of the information needed for traditional open source version testing tasks comes from reputable websites, and many open source tasks on the open source network—such as GitHub—provide some of the information needed for traditional models. not provided. Based solely on their evaluation (such as license usage, GUI settings and minimally well-known configurations, communication tools, and other statistics), traditional methods cannot be used to evaluate the maturity of most open source projects within the GitHub network. A brand-new adulthood score version for open-source tasks is introduced in this document. The open source network GitHub served as a study example throughout the test.

The extensive variety of modelling options that are possible at multiple tiers of the machine is one of the primary challenges in developing simulation software for machine dynamics [2].At the bus stage, designs range from simple vibration equations and algebraic constraints to higher-order systems with intricate controllers and control loops. At the community level, hobby structures range from small toy designs containing a few buses to large national structures containing tens of hundreds of buses and diverse dynamics. Finally, there are a lot of possible outcomes. To name a few, voltage sag, blackout, or blackout. To deal with this complexity, it's often helpful to build a model from scratch, starting with simple topologies and aspect designs and gradually increasing the machine's complexity. This kind of

aspect-based entirely modelling is favoured by the machine's hierarchical shape. At both the community and bus levels, interfaces in subsystems frequently have accurate descriptions.

In recent years, the completion of numerous high-profile projects has led to a steady rise in the use of open source software (OSS).Open source software (OSS) [3] products, on the other hand, are more widely used than closed-source software (CSS) products. Still hesitate to undertake OSS on a large scale. The main reasons are as follows: Large corporations do not recommend it.

The software domains constitute the entire foundation of this division. Software may be divided into large regions based on distribution policy: software with a closed supply and software with an open supply Free/Libre Open Source Software (FLOSS) and Free/Open Source Software (FOSS) [4] are other names for open source software. There are several types of closed-source software: freeware and commercial software. As stated at the outset, our distribution policy stipulates that will divide the entire software collection into three organizations: industrial software, freeware, and open-source software.

With the development of cutting-edge algorithms and cutting-edge benchmarks, artificial intelligence (AI) and machine learning (ML) are rapidly evolving. This development is fuelled by the emergence of that computing power, new types of parallel computing hardware that support extremely rapid numerical computations, and the supply of massive facts, which are linked to ground truth.boom.is made possible by enhancing the algorithms that are currently in use[14]. The art of deepening one's understanding of with the output of business studies and their commercialization, the variety of jobs in the AI and ML field is expanding rapidly. Through the expansion of its own AI studies, business is also having a significant impact on these trends due to the wide range of capability industrial packages. It is generally acknowledged that the changes brought about by those advancements are influencing society. Intend to expand our range in those areas. As a result, a more diverse workforce is expected to ensure fairness in data-driven decisions made by means of AI and ML, in addition to putting underrepresented individuals into rewarding positions. In addition, it is essential to achieve success through action. Algorithms were pleased with the issue under investigation [4].

One of the most frequently cited limitations for researchers in the field of software development is the inability to obtain such data [4]. Researchers have benefited from public supply code repositories in recent years, as open source software development strategies have gained popularity [5].In addition to providing code and problem-monitoring entities, software artifacts facilitate information sharing and data reuse and provide insightful insight into software structure.

II. LITERATURE SURVEY

The purpose of this study is to investigate the kinds of artifacts produced during open source software development. The proposed automatic method for software artifact detection and the use of a system for learning the method in order to accomplish this objective. The proposed artifact type technique's overall performance in relation to selected metrics like accuracy and retrieval is of great interest. The focus of this study is on researchers interested in regularly acquiring software development tools that meet their research needs. The evaluation is carried out as part of an open-source project that was compiled using GitHub [6].

Algorithms that distinguish between legitimate software and malware are developed using machine learning and more advanced deep learning. Algorithms for machine learning can also be developed to identify patterns of cloud-based data access and anomalies that may indicate security risks.

Physical security applications that benefit from AI and ML [7] research include real-time surveying and mapping, regular surveillance, far-off inspection and surveillance, high-altitude image processing, remoted adversary identity, and superior video analytics. Students enjoy participating in projects in these areas by testing their understanding of how computers operate. For instance, the distinction between computer vision and human vision frequently astonishes me. However, ML's ability to grow in these areas is demonstrated by scaling through the use of computers rather than humans for visible tasks like spotting and figuring out large amounts of visible data. Offers.

AI was identified as a crucial generation for the accomplishment of his DoD missions in a 2017 DoD-backed study [reference report]. The field of artificial intelligence (AI) has undergone a radical transformation as a result of the development of graphics processing units (GPUs) and the availability of enormous data sets that can be categorized. DoD Supercomputing Resource Centers (DSRCs) in the Department of Defense has provide DoD scientists with high-performance computing infrastructures[13]. At the time of writing, these facilities offer more than 26 petaflops of computing power across multiple HPC structures and a total of 6.7 billion processor hours per year. However, they require new hires with expertise in HPC, ML, and AI in order to make effective use of this advanced infrastructure. In terms of addressing the information factors required to operate those facilities, universities are trailing behind.

You should first ask yourself these three questions in order to find a mature venture among open-source tasks: 1) What does it mean for a business to be mature?2) To measure a venture's maturity?3) How do you select a mature version and scoring system? The primary query does not have a well-known answer. Open supply tasks have only been officially recommended by a few network websites. According to the survey, those tasks that are encouraged are mature open supply tasks that:B. The most popular open source tasks and open hub items are displayed in the GitHub

Showcase. The second query makes use of the github-api to obtain data indicating the project's maturity level. This is because the components used in traditional open source software adulthood evaluation methods are: can't be downloaded right away from GitHub or other websites. Additionally, the github-api is used to obtain the brand-new OSPAF version [8] factors. The size factors in this version include not only the commit, fork, open-problem, closed-problem, and contributor parameters that are provided by means of the github-api, but also a few other parameters after taking into consideration the time characteristics of those parameters. Includes derived factors as well: B. tar, fork, output, and other costs have increased for the past two months. However, the OSPAF version's derived elements only replicate the temporal characteristics of the two preceding months and no longer the time-collection characteristics of the elements during the development process. For the 1/3 question, open source software readiness evaluation methods typically include Intel's Open Business Readiness Rating, Carnegie Mellon Silicon Valley's Open Source Maturity Model (OSMM) [9], SpikeSource's O'Reily, and Bernard Golden's OSMM. [9] Open BRR)Atos Origin's Qualification and Selection of Open Source Software (QSOS) [9].However, these three models of his awareness do not provide an evaluation of the open source software method or the open source software itself. For instance, Qualys's Opensource Maturity Mode (OMM [9]) considers the evaluation of the software development method, whereas the OMM version considers the open supply software development method's nice, lively, and subsequent testing method.is considered. Other aspects of the assessment.

Vendomo et al. and others carries out empirical research with the goal of using system knowledge to select and frequently locate exceptions to open-source software licenses. They identified 14 distinct license exception types after analysing the source code of 51,000 tasks written in six programming languages.

Zogaan et al. and others presents an empirical study and suggests automated methods for generating traceability education datasets from open source software repositories and technical programming websites. To create educational datasets and classify them solely on the basis of policy-related code artifacts, the proposed method makes use of both massive data analytics and internet mining. System learning classifiers[15] are used in a large data strategy to select tactically applicable documents that can be utilized as educational datasets.

Kaniel et al. and others Provides a dataset that includes the source code for the Debian operating system and the associated FOSS historical metadata. In addition, there are numerous tasks within the field of mining open source software repositories [10], primarily focused on analysing coding issues and supply code.

Our research adds to and extends existing research. Based entirely on heuristics and systemlearning strategies, suggest an automatic approach.

III. METHODOLOGY

In order to design a software for information sharing, I developed a completely open-source platform based on the internet. Figure 1 demonstrates the proposed method. The current machine requires customers to add contacts before they can be submitted by importing them into an Excel spreadsheet. The proposed machine sends text messages at predetermined times and routinely retrieves information from client databases. With our SMS provider, the easiest way to attract customers and acquire them is through keywords. Keywords are short, catchy phrases that help you get people to sign up for your dedicated phone number via SMS [10] in order to take advantage of promotions. If they respond, they will be authentically added to our client database, which is managed by means of a completely online platform. The goal of this project is to automate SMS marketing, and there is a feature to the following capabilities are provided by the proposed machine:

The implementation of the proposed framework for message sharing employing Open-Source Software Web Applications is outlined below.

There are four sections to this implementation. The first part outlines a set of marketing strategies that are appropriate for specific OSS product categories and are entirely based on the results of previous sports. These designs can be applied to various types of open source software (OSS) [11] products and assist both established OSS products and start-up organizations in developing successful business plans. The second part looks at how useful the newly described version is. The information gathered during this test is used to validate and enhance the described version. Based solely on the outcomes of the assessments carried out within the second part, the third part enables you to eliminate some marketing factors and upload others. The results of the second test are verified and improved upon using the information gathered during the first test. In the end, the results of the data and evaluation are combined into a model, and instructions are found that go through a fourth round of testing for confirmation.

Application of a heuristic and randomly pattern a subset of the most commonplace extensions using a current filename/extension taxonomy [10] to test its accuracy. The anticipate that the filename will also provide useful information for identifying the artifact, in addition to the file extension. Check code, for instance, is frequently created in directories whose names include the words "check" or "assessments," and audio documents are frequently identified by their.wav extension. Through layout, it is assumed that this identity is accurate. On the other hand, some txt documents, such as the one below, cannot be diagnosed without examining its contents.

method for extracting features. There are a variety of statistics retrieval techniques that can be used to create a set of capabilities for a text type problem. Weighting schemes like Term Frequency-Inverse Document Frequency (TF-IDF) [12] and vector area designs, for instance, can be

utilized to routinely extract the most crucial phrases from a record. Latent Dirichlet Assignment (LDA) and Latent Semantic Indexing (LSI) [12] are two other more cutting-edge methods that can be utilized. Strategies for information retrieval are most effective when the records' addresses are unknown. To put it another way, it is based on methods for picking out hidden styles that represent each record.

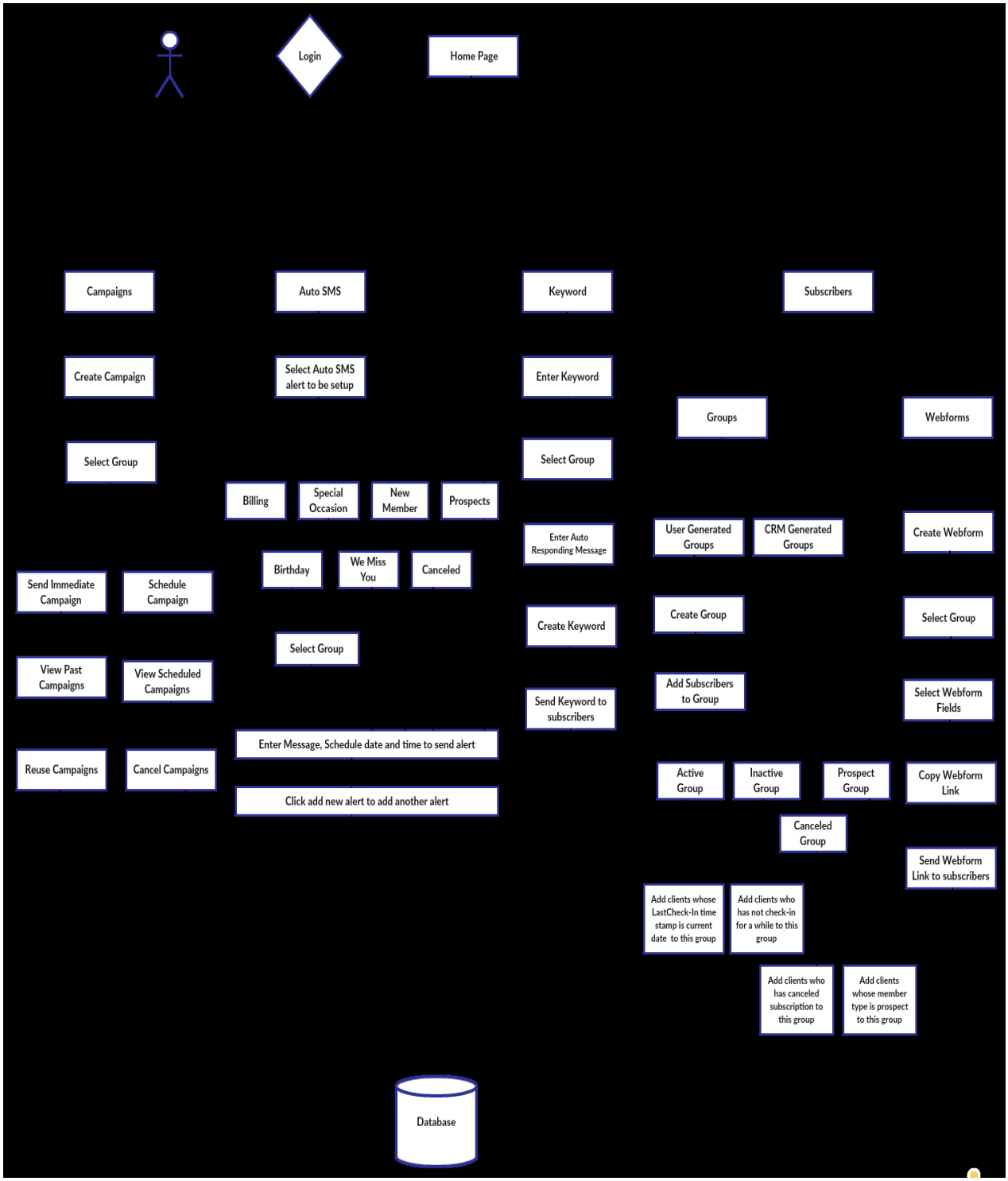

Fig 1. Framework design of Proposed System

- Algorithm machine learning: Then select seven outstanding system learning strategies that fall into three categories: Bayesian networks, guide vector machines, and decision timber. These algorithms work well in text type problems, according to research [12]. Test the classifier with a 10-fold cross-validation using the Weka implementation provided by [12]. To put it another way, the predictive model is evaluated by dividing the actual pattern into ten subsamples of the same size, performing the evaluation on one subset, and validating the evaluation on the other subset. The common estimate of the predictive version is obtained by repeating the validation ten times. The parameters that were optimized and the set of rules that were chosen are briefly described. Due to the extensive selection of timber, overfitting is avoided.
- It is well known that random forests are strong against noise and correlated variables. Utilize the random Forest feature (bundle random Forest) with 500 timbers as a starting point. Previous works have demonstrated this to have real effects [12]. Change the wide range of capabilities tested in each branch parameter from the default price of (log2(#predictors)+1) to 20% of the entire wide range of capabilities by adjusting the wide range of timber parameter, which ranges from 500 to 1000.zero.05 in increments of
- An implementation of John Platt's sequential minimal optimization set of guidelines for guide vector classifiers is Sequential Minimum Optimization (SMO). With this classifier, and combine the RBF kernel, the polynomial kernel, and the feature-based completely Pearson VII standard kernel (PUK) [12]. Change the price parameter from 1 to 50 in one increment, change the gamma parameter from zero to one in zero.05, and change the classifier exponent parameter from zero to four zero in zero.
- A particular variant of Naive Bayes, the Multinomial Naive Bayes, was developed to improve overall performance on text-type problems [12]. The only probabilistic classifier that makes use of Bayes' theorem is Naive Bayes. Concerning the entry, base our assumptions on the following: Features are considered conditionally independent of one another. Utilizing kernel estimators and supervised discretization, investigate the performance of the classifier.
- Improve normal predictive performance by combining person classifiers with ensemble learning. Make use of the Weka-provided set of rules for bulk voting. The majority method uses the label that was agreed upon by a majority vote and considers each classifier's vote for the instance's label.

IV. RESULTS AND DISCUSSION

The results are generated based on the application developed for message sharing using the Open-Source Software Web platform is discussed below.
The following steps are outlined in the proposed machine from Fig 2:

- An administrator of memberships should be logged in.
- Club Managers can send campaigns and install SMS notifications once they are registered.
- A collection should be created by a membership administrator in order to create a marketing campaign.
- A person is added to a collection.
- Using a keyword, a web form, or a CSV add, users can join agencies.
- Choose the institution that will receive the marketing campaign.
- Club directors are now able to send campaigns or schedule campaigns to be sent in the near future.
- Birthday Alert, New Member Alert, Prospecting Alert, Special Occasion, Billing Alert, Missing Alert, and Abandoned Message Alert are the seven automated SMS indicators.
- Those SMS notifications can be set up by club directors.
- Subscribers receive birthday wishes from Birthday Reminder.
- Create messages and reminders for a unique day.
- New member notification is about to send a welcome message to subscribers. The machine frequently welcomes new participants.
- A goodbye message for cancellation is about to be created by cancellation notification.
- When it came time to pay, the fee notification stopped because there was an issue processing the payment.
- Miss you Notifications are set to send notifications to participants who haven't logged in in a while.
- The prospect notifications are set to send a series of text messages to participants encouraging their ability.

From Fig 3, created an Open Source Web application for message sharing between the users. The Fig 3 shows the Log-in page to enter into the application to access the details of other subscribers.

Fig 4 shows the resultant chart to display the total number of subscribers joined in the application and shared the messages.

Fig 5 shows the final activity chart showing the total reporting details of all subscribers sharing their messages. The Open Source Software created by HTML and XML on Windows and Linux systems. This is running using the JAVA platform for Web Application development. From all the results and can clearly see the total number of subscribers logged into the website, communicating each other, passing the messages, sending alerts to the subscribers and so on.

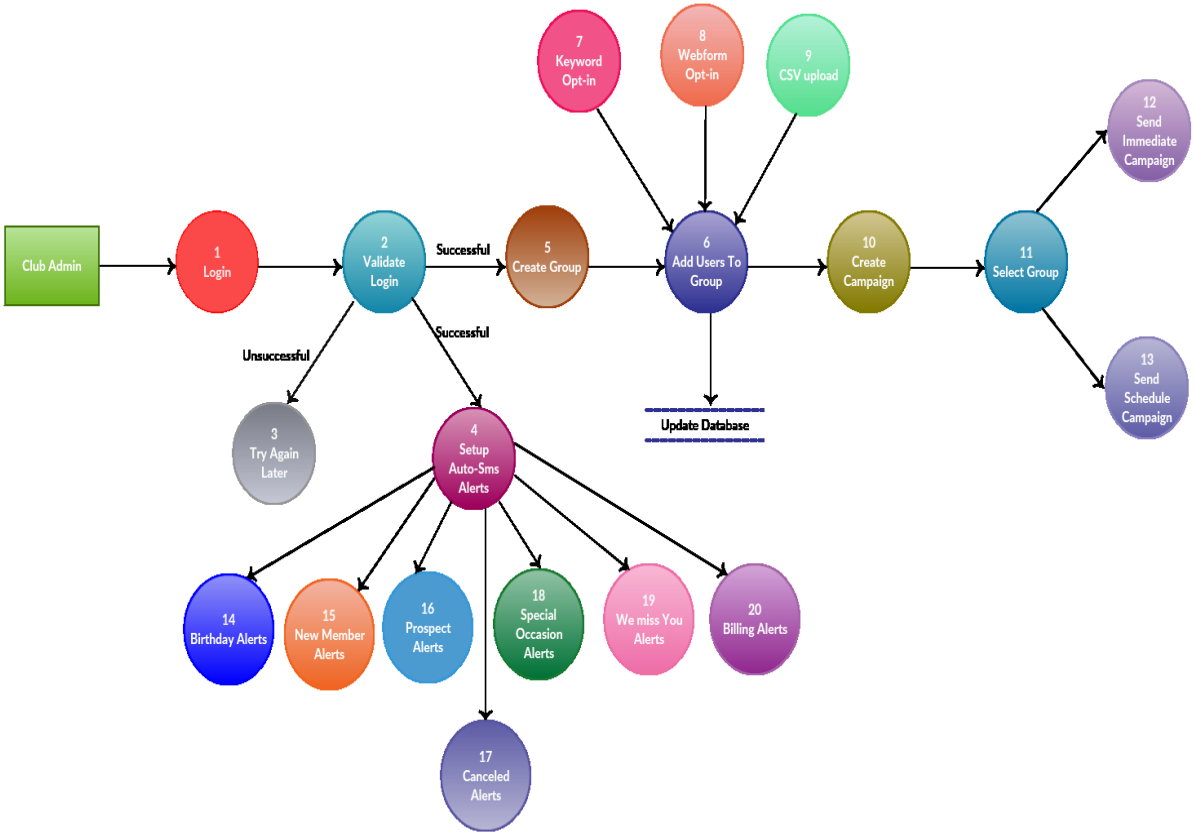

Fig 2. Creation of User Module for Message Sharing

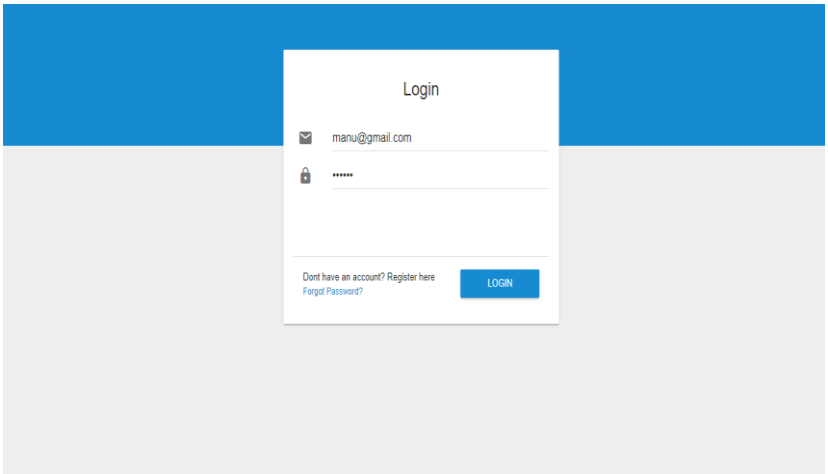

Fig 3. Log-in page creation for message sharing web application

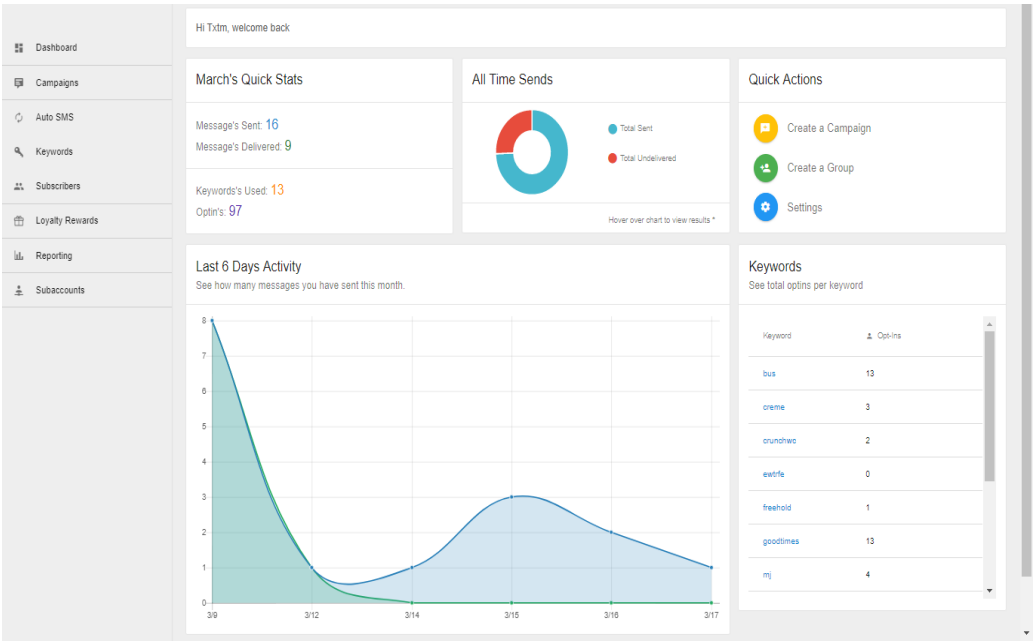

Fig 4. Analysing the data using Machine Learning techniques to show the past activity

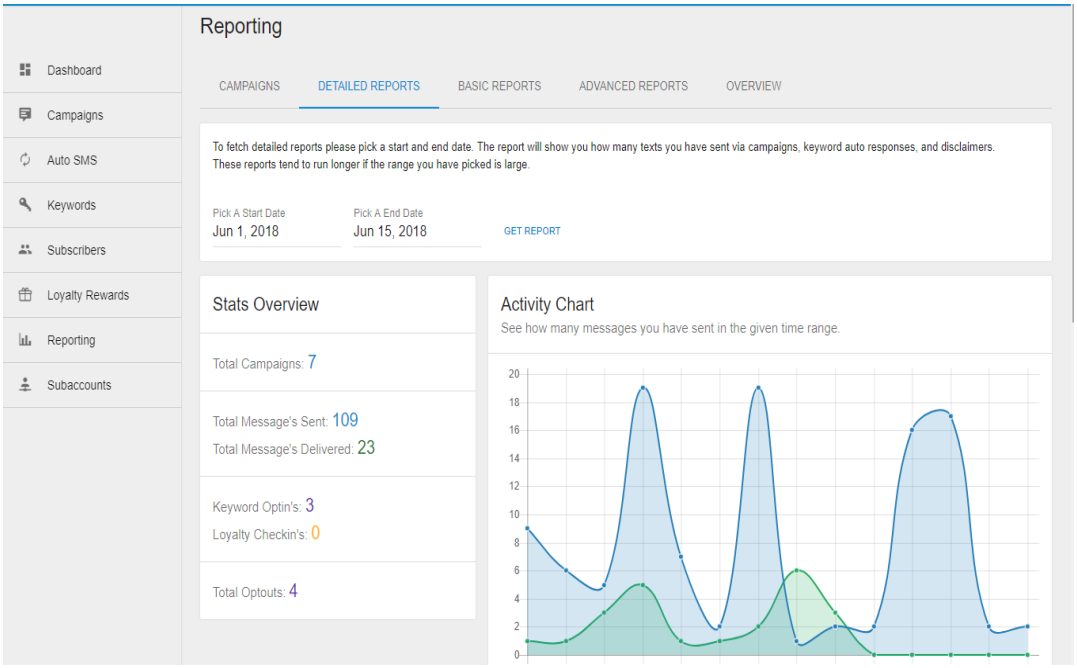

Fig 5. Detailed report page and showing the activity chart

V. CONCLUSION

One of the most well-known and least expensive methods of advertising and marketing is SMS.SMS marketing involves simultaneously sending messages to a large number of people. Keywords are the easiest way to attract and gather customers for your SMS provider. Keywords are short, memorable phrases that help potential customers benefit from promotions by inviting them to your committed phone number via SMS. They will be authentically added to our client database if they solve the problem. The proposed machine will text her at the scheduled time after routinely retrieving information from the client database and also including the possibility to include a hyperlink in your SMS message to direct individuals to your Facebook page, mobile app, picture, website, YouTube video, or other content.

An automated method for classifying open source software artifacts is provided in this white paper. The results of a thorough evaluation of the proposed method show that the combination of ML algorithms and ensemble learning outperforms individual type strategies. In order to investigate the kinds of software artifacts produced by open source tasks, our method is applied to 383 randomly

selected open source tasks. This empirical study's findings show that requirements and layout files, which are of interest to software engineering researchers, are included in approximately 14.88 percent of open source projects has done so.

In the future the system would be able to migrate advanced features like image and video based image sharing options.

REFERENCES

[1]. Büttner and H. Würfel. (2021, Nov.) PIK-ICoNe/Open Power-Simulation- Conference-2021-Paper:. [Online]. Available: https://doi.org/10.5281/zenodo.5744264.

[2]. Kulbhushan Bansal;Sunesh Malik;Harish Rohil "Multiclass Labelling For Bug Report Severity Prediction Using Semantic Analysis And Machine Learning", 2022 Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT).

[3]. Minseok Ryu;Youngdae Kim;Kibaek Kim;Ravi K. Madduri "APPFL: Open-Source Software Framework for Privacy-Preserving Federated Learning", 2022 IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW).

[4]. Trager Joswig-Jones;Kyri Baker;Ahmed S. Zamzam "OPF-Learn: An Open-Source Framework for Creating Representative AC Optimal Power Flow Datasets", 2022 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference (ISGT).

[5]. Masahiro Matsui;Takuto Sugisaki;Kensaku Okada;Noboru Koshizuka "AlphaSQL: Open Source Software Tool for Automatic Dependency Resolution, Parallelization and Validation for SQL and Data', 2022 IEEE 38th International Conference on Data Engineering Workshops (ICDEW).

[6]. Allison L. Clouthier;Gwyneth B. Ross;Matthew P. Mavor;Isabel Coll;Alistair Boyle;Ryan B. Graham "Development and Validation of a Deep Learning Algorithm and Open-Source Platform for the Automatic Labelling of Motion Capture Markers", IEEE Access Year: 2021, Volume: 9.

[7]. Mohsen Nabian;Yu Yin;Jolie Wormwood;Karen S. Quigley;Lisa F. Barrett;Sarah Ostadabbas "An Open-Source Feature Extraction Tool for the Analysis of Peripheral Physiological Data", IEEE Journal of Translational Engineering in Health and Medicine, Year: 2018, Volume: 6.

[8]. Anand Handa;Rohit Negi;Sandeep Kumar Shukla "Implementing Enterprise Cybersecurity with Open-Source Software and Standard Architecture", Year: 2021, Book Chapter, Publisher: River Publishers.

[9]. Thiago Schaedler Uhlmann;Pedro Henrique Dos Santos Sbais;Luciano Antonio Mendes "ELSA-Py - Open-Source Extension for Communication and Data Management in Interactive Remote Experimentation Under Ilab Shared Architecture", 2018 13th APCA International Conference on Automatic Control and Soft Computing (CONTROLO), Year: 2018 | Conference Paper | Publisher: IEEE.

[10]. Jie Shen;Maja Pantic "A software framework for multimodal humancomputer interaction systems", 2009 IEEE International Conference on Systems, Man and Cybernetics. Year: 2009 | Conference Paper | Publisher: IEEE.

[11]. Benjamin F. Jamroz;John M. Dennis "Minimal Aggregated Shared Memory Messaging on Distributed Memory Supercomputers", 2016 IEEE International Parallel and Distributed Processing Symposium (IPDPS). Year: 2016 | Conference Paper | Publisher: IEEE.

[12]. Thariq Hussan, M. I.,Saidulu, D et al.2022. Object Detection and Recognition in Real Time Using Deep Learning for Visually Impaired People. International Journal of Electrical and Electronics Research (IJEER), FOREX Publication, 10(2), pp.80-86

[13]. Soursos, S.; Žarko, I.P.; Zwickl, P.; Gojmerac, I.; Bianchi, G.; Carrozzo, G. Towards the cross-domain interoperability of IoT platforms. In Proceedings of the 2016 European Conference on Networks and Communications (EuCNC), Athens, Greece, 27–30 June 2016; pp. 398–402. [Google Scholar] [CrossRef]

[14]. Derhamy, H.; Eliasson, J.; Delsing, J. IoT Interoperability—On-Demand and Low Latency Transparent Multiprotocol Translator. IEEE Internet Things J. 2017, 4, 1754–1763. [Google Scholar] [CrossRef]

[15]. Joshi, R.; Mellor, S.; Didier, P. The Industrial Internet of Things Volume G5: Connectivity Framework; Technical Report; Industrial Internet Consortium: Needham, MA, USA, 2017. [Google Scholar]