

IOT based Transformer Health Monitoring System

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CS46: This paper illustrates the Design and development of IOT based transformer health monitoring system using arduino. As the Transformers are heart of power production and distribution. Damages of transformer effect on power distribution. Damages happen due to poor maintenance and overheating. Sometimes over load create very huge problem. But there is no transformer health monitoring system available in existing electricity department. In this paper we are proposing a solution like IOT based transformer health monitoring system. This paper includes WIFI (Esp8266/IOT module), which is connected to Arduino through UART interface. Temperature sensor (LM35) connected to Arduino through analog pin. Shunt resistance and voltage divider connected to Arduino Analog pins respectively. Here, a load (bulb) and transformer may be connected. A current sensor measures the load's current value. Voltage sensors also read voltage. This load variation circuit changes the load's voltage and current. Transformer temperature is read by an LM35 and updated on the LCD. Through WIFI (Esp8266/IOT module), temperature, voltage, and current information will be updated on the IOT server. IOT server data is accessible to users from anywhere. Data may be seen in graphical representation. Data may be seen in graphical representation. In this paper, a controlled 500mA, 5V power source is used. Voltage control is accomplished using the 7805 three terminal voltage regulators. The ac output from the secondary of 12V is rectified using a bridge type full wave rectifier.

Wireless Technology based Defence Landmine Safety System

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CS48: The landmine has been a threat to both civilians and military in all around the world. The existing technique of landmine detecting of carrying a metal detector by the human has threat and possibility of becoming a victim while detection of landmine. This research paper depicts to design a four wheeled robotic vehicle integrated with sensors to detect the landmine without human intervention and is designed in such a way that no harm while detecting landmine nor becoming a victim while detecting. After detecting the landmine, the exact location of latitude and longitude and certain important parameters are fed to the server with help of IOT. The diffusing team will then access the server for future course of action.

Keywords—Landmine, Robot, Sensor, Military, Weapon