

**BHARATH NIKTEAN ENGINEERING COLLEGE,  
AUNDIPATTI  
ELECTRONICS AND COMMUNICATION ENGINEERING  
IBM NALAIYA THIRAN  
LITERATURE SURVEY**

**TITLE : Hazardous Area Monitoring For Industrial Plant**

**DOMAIN : IOT**

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## **ABSTRACT:**

The Industrial Internet of things or IIoT has gained recognition due to the advancement it has made in communication technology. Industrial IoT is an application of IoT that enables control of industries over the Internet using smart devices and sensors. The two main entity which ensures effectiveness in any field is monitoring and control. Keeping a view on this aspect, we have designed a low-cost, low-power Wi-Fi based industrial monitoring system that controls and monitors the remote manufacturing plants and industries using a web application. In this model an Arduino Mega which is the main micro-controller is connected with a Wi-Fi module for internet connectivity, a barometer sensor for temperature and pressure, a humidity sensor for sensing the humidity and a gas sensor which detects the smoke and harmful gases. These components are utilized to build a monitoring system. Apart from these components several other sensors are used to keep a check on the temperature, gas leakage, pressure, humidity, etc. in the work environment to ensure the workers safety. In case of any incident this monitoring system warns the workers by an alarm and sends information to the registered user via Blynk App. The chief purpose of this research is to sum up the significant role of IoT in monitoring industries.

## **INTRODUCTION :**

Technology advancement is a never-ending process; thus, we must be well-equipped and informed about new developments. Day-to-Day human life has gotten more convenient as a result of these technological improvements. Automation has evolved into a must need. The internet today provides access to all data and systems, and web technology is continually expanding. A network interface enables remote management and control of embedded devices using a web-based embedded system. Controlling Internet of Things (IoT) devices is done through web controllers, often known as E-controllers. A web controller, often known as an Econtroller, is a set of embedded systems and software stacks that is the most extensively used method of web development in the world. Instead of employing large server systems for monitoring, administering, and handling data, remote login and monitoring using a distributed web control system produced using web pages generated in web applications are increasingly used instead of big server systems for monitoring, administering, and processing data. Web control systems that leverage IoT has three characteristics: energy savings, comfort, and efficiency. Our main objective is to adapt the Internet control system to the Internet of Things, allowing users to access the application over the Internet from anywhere in the globe. IoT monitoring allows you to analyze dynamic systems and analyze billions of events and alerts. IoT monitoring also enables you to bridge the gap between devices and

businesses by collecting and analyzing a wide range of IoT data at a web scale across connected devices, consumers, and apps. The industrial monitoring system connects itself with the open-source app Blynk. Blynk connects itself with esp8266 for virtual control of the devices along with getting updates. The Arduino Mega is the brain of the project connected to the component and operates them with the code embedded in it. Sensors like smoke sensors, humidity, and temperature sensors are used to monitor the surroundings of the machine.

## **LITERATURE SURVEY :**

IOT is a platform which has varied applications in day to day life ranging from domestic to industrial. The systems we are going to implement aims to provide a low cost, low maintenance and robust architecture for analyzing hazardous situations in heavy industries. Various papers published in the field of IOT have touched different aspects of this project.

Android user via c2DM service presents a WSN prototype for remote room temperature monitoring, which can be used for the safety operation, via an android platform. The proposed system provides an android user interface for registered user to access the current temperature and a flash /beep message in case of fire. This paper influenced our work in selecting the platform for alerting the user and connecting it with central controller .

Online analysis and fault finding system for distribution transformers using IOT is about design and implementation of embedded system to monitor and record key parameters of a distribution transformer like load currents, oil level, oil quality and ambient temperature. This paper provided insights about applications of IOT based systems in industrial environments, and how multiple sensors are unified together.

Real time monitoring of CO<sub>2</sub> emissions in vehicles using cognitive IOT aims to reduce the green house effect by real time monitoring and controlling of CO<sub>2</sub> emission caused due to vehicles and industries using cognitive IOT.

Temperature and humidity sensing using IOT highlights some of the advantages of working with a Raspberry Pi, which helped us to implement a network, running scripts and graphical visualization of data.

Industrial temperature monitoring and control system through ethernet LAN in which temperature sensor measures the temperature and produce corresponding analog signal which is further processed by the central microcontroller. The wired approaches is less efficient in industrial areas and thus we were motivated to implement a wireless systems .

## REFERENCE:

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