IOT Based Gas Leakage Monitoring & Alerting System

Internet of Things (IOT) Based Gas Leakage Monitoring and Alerting System with MQ-2 Sensor

Objective

The principle of operation of IOT based gas leakage and monitoring system was shown by operating the Raspberry pi 3 model attached with embedded system with required input and output gas level with the help of gas sensors.

Methodology

Sensor node are implemented using Raspberry pi 3(ARM Cortex-M).

Then **ARM Cortex-M** connected with MQ2 gas sensor.

Raspberry pi 3 has been used as a single-board computer with wireless LAN and Bluetooth. Which helps us to control and monitor the detected gas level through a sensor and it is interfaced with a free web page is linked via cloud interface.

Outcome

This results in a more efficient in operation because it is connected to a common web page specially built to notify or email the responsible authority automatically so reduces the stress of constant monitoring.

Future Scope

The main advantage of this project is the mail notification about gas leakage is sent to all workers in the industry so that it reduces the stress of constant monitoring.

Gas Leakage Detection System using IoT with integrated notifications using Pushbullet-A Review

Objective

The main objective of this project is based on detection of gas leakage in homes, restaurant workplace and other using Arduino,cloud database and ESP8266.

Methodology

Gas leakage is detected using MQ5 sensor.

The data from the gas sensor when leakage occurs is transmitted (in Volts) to the Arduino

ESP8266 wi-fi module, sends data from the arduino to the cloud storage through the internet

A cloud-based database collection system (thingspeak) to store user data in the cloud. Through this tool, pushbullet is configured which is used for data transfer from mobile to computer and is used to receive notifications on the web/mobile

Outcome

Once gas is leaked from the surroundings, a physical alert in the form of a buzzer and a notification to the mobile/laptop from pushbullet is sent to the user

Future Scope

The user can get details about gas leakage by both buzzer system and notification in mobile/web.

Home and Industrial Safety IoT on LPG Gas Leakage Detection and Alert System

Objective

The main operation of this system is based on detection of gas leakage in homes, restaurant workplace and other using Sensor node, MQ2 gas sensor and cloud data base

Methodology

Sensor node are implemented using Intel Edision board.

Then Intel Edison board connected with buzzer, LEDs and MQ2 gas sensor.

Wi-Fi router that interconnected the sensor node to Ubidots IoT Cloud platform.

Outcome

Ubidots Dashboard to display and visualize the gas level data and Ubidots Data Analytic to analyses the threshold limit of gas leakage detection level that invoke an alert of gas leakage to home owner via telegram/sms on smartphone.

Future Scope

It alerts users to know about the level and leakage of gas through mobile notifications and buzzer system in which if the level of gas below threshold level the user can refill the gas.