Man Hole Detection and Monitoring System Using IOT

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A B S T R A C T

Today situation is very critical for Municipal party to handled this situation our project is very useful to municipality by this project work of the municipality make very easy and smooth Li environmental condition is not good today's suddenly rain is come and level of drainage is increased buy this some accident is orca then the system is very useful manhole detection and monitoring system using iot by this system we detect the manhole condition and monitoring this without any man this system is based on iot therefore no any physical contact with man.

Introduction:

Manhole detection and monitoring system using IOT it is a very useful system to all of us by this we detect manhole condition in this system. We used the different components like water flow sensor ,gas sensor , temperature and humidity sensor . This project overcome the demerit of paper by detecting drainage water flow speed rate by installing water flow rate sensor at the intersection of nodes when there is a blockage in a particular road there is variation in the flow of drainage in water which when across the seat value will display the alerts in the managing station by the system. we protect the health of municipality working staff. In this system we use different components this components is very high output and input components and very efficiency component buy this components and this system we detect any problem occur in manhole without any man.

Literaturesurvey:

In our manhole detection and monitoring system project we have detect the flow of water, toxic gases, sense the humidity and temperature in the manhole and they send the IOT message to municipal corporation. In this system we have also reduce the work of man power and easy to handle situation.In previous system man had to go inside the drainage system and clean the garbage but in the new system the work has been made easier and safe by reducing those things.

Component

- Arduino Uno
- DHT 11 Senser
- MQ4 GAS SENSOR
- FLOW SENSOR
- WIFI MODULE ESP8266
- LCD DISPLAY

Proposed system model:

Manhole detection and monitoring system using IOT. It is a very useful system to all of us buy this system detects and monitoring the manhole situation. In the system used the different components like Arduino UNO, DHT11 sensor, MQ4 gas sensor flow sensor, Wi-Fi module ESP8266 LCD display. In this system we used the different sensor, if any problem is occurs in band holder centuries since this problem and send the information to the microcontroller and Microcontroller is give information and by Wi-Fi module this is for information says to the of authorised person.

Circuit diagram:
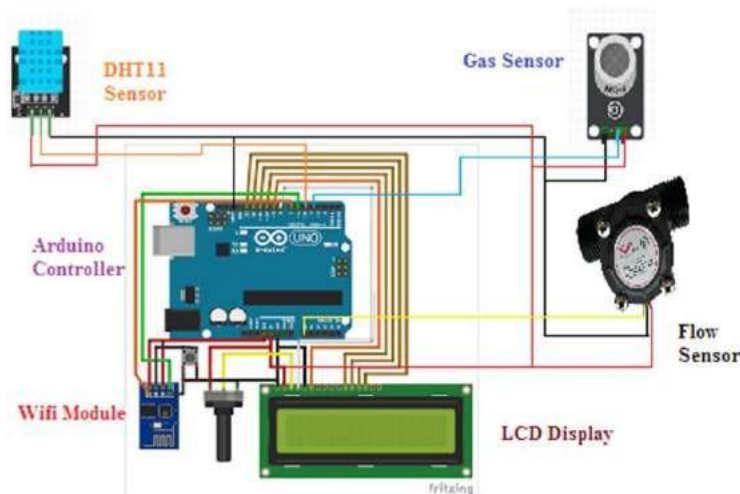


Working principle:

The system detect the blockage and water level it also monitors the condition water flow rate by different sensor we identify the temperature humidity and gas leakage this is also detect the condition of manhole means the cap of men holes is open or closed Door by using ultrasonic sensor the we used different sensor like tilt sensor gas sensor temperature sensor flow sensor particular sensorparticular sensor reaches to respective threshold table this value sends to the microcontroller any problem is occurs sensor fence and send that information to microcontroller then microcontroller sense the signal from the Wi-Fi module to the person in charge then this alert reach to person in charge then this person in charge take the requirement action regarding the problem occupying inside the manhole.

Flow chart explanation:

Start the output of start given to the power ab hardware then the power of hardware is one main the device is turn on means by this devise get triggering pulse. The output of power up hardware is connected to different types of sensor like gas sensor flow sensor temperature sensor this sensor if any problem occurs in manhole then the sensor says this problem and you're the output of microcontroller. Any problem is obtained under manhole sensors change this and get information to microcontroller. The output of microcontroller is given to another block this block name is if any sensor extend its set value in this block we know which sensor is activated because each sensor set a particular live value to any problem is occur in this live value indicate which sensor is turn on and which problem is occur. Then any problem is obtained in manhole then sustain and live value indicates which sensor is activated then display is active and display on sensor whichever problem is occur.

Result:
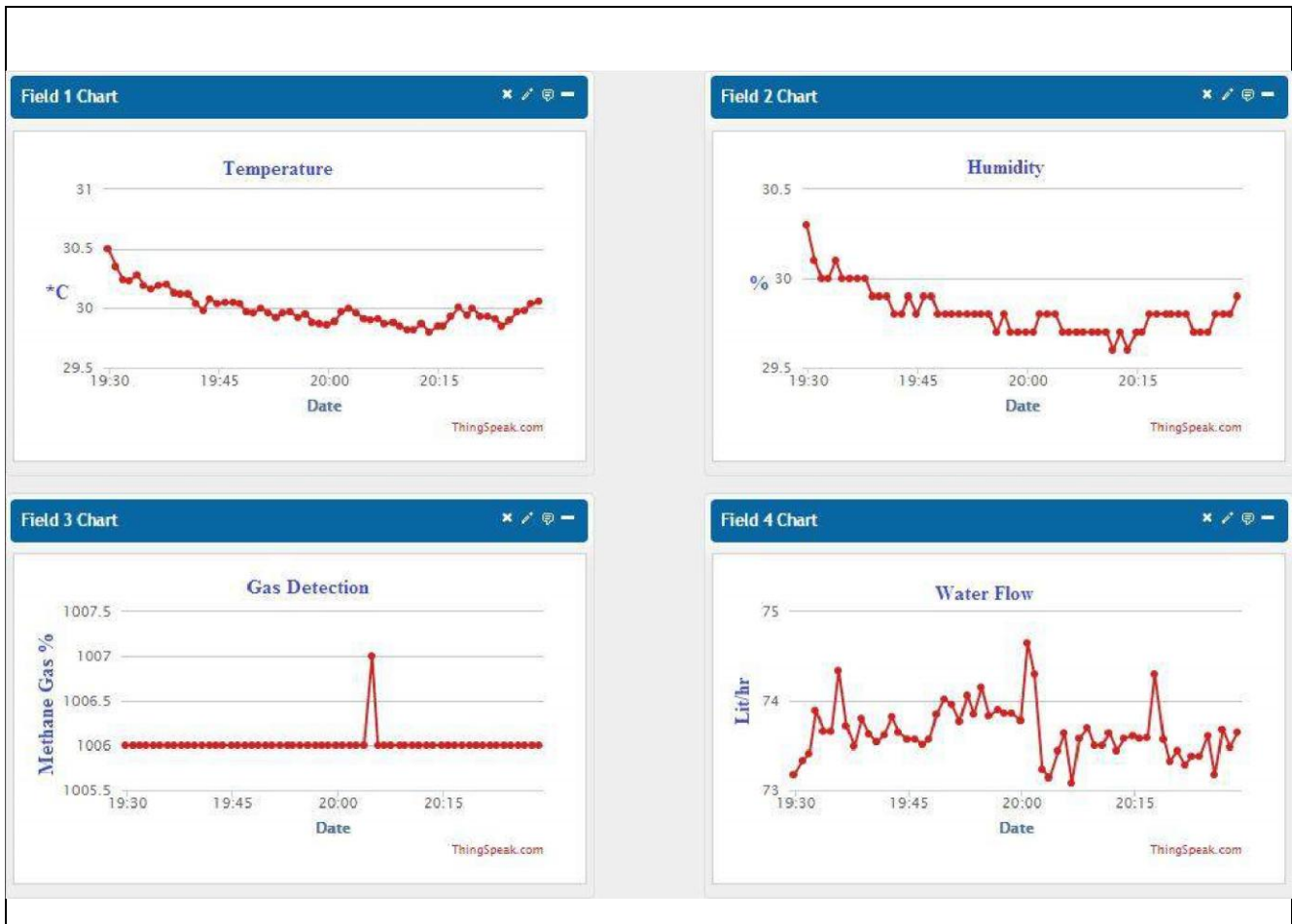
5. Scope of the project:

This project is very useful to our day to day life. In this project we detect the manhole condition and monitoring . If any change in working of man whole this system is detect this and correct this fault which system detects blockage and water level and its also monitors the condition water flow rate by flow sensor. We identified temperature humidity and sense toxic gas. This is also detect the condition of manhole.

Conclusion:

- The senser unit is automatically sense the all paramiters like toxic gas,flow rate of water and also sense the humidity and temperature in manhole drainage.
- This project system is reduce the work of man power and increasing the safety of work and speed of work.
- It is easy to get all above mentioned information in one click solution.

Reference

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