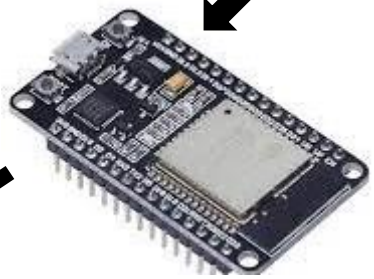
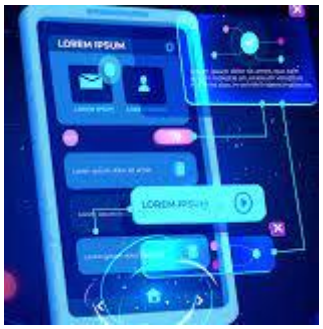
Functional Features

Methane Gas Leakage

MQ5 Sensor



ESP32



See the values on app

Siren alerts everyone

LED glows & Alert

Functions:

Sl. No	Functions	Description	Technology
1.	Application Logic-1	Send the value of CH4 gas. If there is gas leakage, alert is sent to respective authorities through alert message.	Python / Wokwi
2.	Application Logic-2	Buzzer will be on in the working place if there is leakage. The working people can evacuate immediately after hearing the buzzer sound.	IBM Watson IoT service
3.	Application Logic-3	Motion detecting sensor is used. If there is nobody in the leakage area, the doors closes automatically in order to avoid further spread of harmful gases.	IBM Watson Assistant
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Server Configuration:	Cloud Foundry

Features

Cutomers:

* Gas Producing Industry
* Safety Control Personals
* Mining

Problems:

* Having no proper system for monitoring the leakage
* Facing High Budgets

Triggers:

* Higher health issues due to toxic gas

Emotions:

* Before: Fear
* After: Confidence

Available Solution:

* Using of sensors to monitor the level of gas continuously
* Send the values to the authorities through a moblie app

Customer Constraints:

* Complex installation
* HIgh Budget

Behaviour:

* Only on certain industries, harmful gases are produced. If there is any leakage, alert must be given to all the employess, so that they can evacuate immediately.

Channels of Behaviour:

* Alert message will be sent to the authorities if there is any leakage.
* Gas level can also be monitored through mobile app.

Solution:

* In order to stop futher spreading of harmful gas, doors are automatically closed after the evacuation of the employees in the working area.