

Ideation Phase

Literature Survey

Date	19 September 2022
Team ID	PNT2022TMID35867
Project Name	Gas Leakage Monitoring and Alerting System

REF NO.	TITLE	LITERATURE	DESCRIPTION
1	Kodali, R. K., Greeshma, R. N. V., Nimmanapalli, K. P., & Borra, Y. K. Y. (2018, December). IOT based industrial plant safety gas leakage detection system. In <i>2018 4th international conference on computing communication and automation (ICCCA)</i> (pp. 1-5). IEEE.	IEEE 2018	The proposed system uses MQ6, MQ4 and MQ135 gas sensors which detect LPG, Methane and Benzene gas leaks respectively and uses ESP-32 as a Wi-Fi module. The sensor's data is stored in UBIDOTS cloud server so that people related to the plant can just login and monitor these gases. IFTTT web service is used to send a warning message to the concerned persons.
2	Zinnuraain, S. M., Hasan, M., Hakque, M. A., & Arefin, M. M. N. (2019, March). Smart gas leakage detection with monitoring and automatic safety system. In <i>2019 International Conference on Wireless Communications Signal Processing and Networking (WiSPNET)</i> (pp. 406-409). IEEE.	IEEE 2019	The proposed system uses MQ2 sensor to detect the Liquefied Petroleum Gas leakage and uses ATMEGA-2560 microcontroller. BLYNK mobile application is used to display the data collected and LCD is used to display the same.
3	Suma, V., Shekar, R. R., & Akshay, K. A. (2019, June). Gas leakage detection based on IOT. In <i>2019 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA)</i> (pp. 1312-1315). IEEE.	IEEE 2019	The proposed system uses MQ5 sensor to detect the Liquefied Petroleum Gas leakage and used ATMEGA 328 as microcontroller. GSM module is used to send an SMS to the registered mobile number and LCD is used to display sensor's data.
4	Amsaveni, M., Anurupa, A., Preetha, R. A., Malarvizhi, C., & Gunasekaran, M. (2015). Gsm based LPG leakage detection and controlling system. <i>The International Journal of Engineering and Science (IJES) ISSN (e),</i> 2319-1813.	IJES 2015	The proposed system uses MQ6 sensor for LPG gases leakage and PIC microcontroller is used. The exhaust fan is switched on to reduce the concentration of gases in the room. The stepper motor is rotated to close the knob of the cylinder and the relay is used to switch off the power supply of the house. The buzzer produces an alarm to indicate the gas leakage. Then, the user is alerted by SMS through the GSM module.

5	Subramanian, M. A., Selvam, N., Rajkumar, S., Mahalakshmi, R., & Ramprabhakar, J. (2020, January). Gas Leakage Detection System using IoT with integrated notifications using Push bullet-A Review. In <i>2020 Fourth International Conference on Inventive Systems and Control (ICISC)</i> (pp. 359-362). IEEE.	IEEE 2020	The proposed system uses MQ5 sensor for detection and uses ESP8266 Node-MCU Wi-fi module as microcontroller. Thing Speak -A cloud-based database collection system is used to store user's data and sufficiently help the user to record total data stored in the cloud. Through this tool, push bullet is configured which is used for data transfer from mobile to computer depending on the file size and is used to receive notifications on the web/mobile.
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