

GAS LEAKAGE MONITORING AND ALERTING SYSTEM

LITERATURE SURVEY

S.NO	TITLE	AUTHOR AND YEAR	NAME OF THE JOURNAL	DESCRIPTION
1	IOT Based Industrial Plant Safety Gas Leakage Detection System	Ravi Kishore Kodali, R.N.V. Greeshma, Kusuma Priya Nimmanapalli, Yatish Krishna Yogi Borra 29 July 2019	2018 4th International Conference on Computing Communication and Automation (ICCCA)	<ul style="list-style-type: none"> ➤ This paper proposed and implemented a wireless gas leakage detection system for industrial plants. ➤ In the system architecture, multiple sensors are placed around the region of interest in the plant. ➤ The Sensing System detects the leakage and alerting system sends a warning message. The warning message is sent to the mobile number with very less delay.
2	Smart Gas Leakage Detection with Monitoring and Automatic Safety System	S.M. Zinnuraain, Mahmudul Hasan, Md. Akramul Hakque, Mir Mohammad Nazmul Arefin 12 March 2020	2019 International Conference on Wireless Communications Signal Processing and Networking (WiSPNET)	<ul style="list-style-type: none"> ➤ The proposed System is mainly aimed for household purposes, where the user can be notified of the amount of LPG remaining in the cylinder so that necessary actions can be taken to pre-book a new cylinder without any hassle. ➤ The proposed system notifies the user about any LPG leakage to take preventive action to avoid an explosion by sending data with the help of Wi-Fi and with an automatic safety system.

				<ul style="list-style-type: none"> ➤ The proposed system can also be used in hospital in case of an LPG leakage and it can also be used commercial sectors such as shops, hotels etc
3	IoT Based System for Monitoring and Control of Gas Leaking	<p>S. Z. Yahaya, M. N. Mohd Zailani, Z. H. Che Soh, K.A. Ahmad</p> <p>14 April 2021</p>	<p>2020 1st International Conference on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE)</p>	<ul style="list-style-type: none"> ➤ This paper presents an IoT based monitoring for gas leakage where the user is notified when gas leakage occurs and preventative actions can be taken via their smartphone. ➤ This system allows the user to monitor the concentration of gas in their house and take necessary action when gas leakage happens. ➤ The system also provided accurate reading of gas concentration at below 0.5% error if compared to the actual reading.
4	Gas Leakage Detection and Smart Alerting and prediction using IoT	<p>Asmita Varma, Prabhakar S, Kayalvizhi Jayavel</p> <p>11 July 2017</p>	<p>2017 2nd International Conference on Computing and Communications Technologies (ICCCT)</p>	<ul style="list-style-type: none"> ➤ The proposed gas leakage detector is promising in the field of safety. ➤ The attempt while making this prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gases to minimize and hence nullify any major or minor hazard being caused due to them.
5	Gas Detection Approaches in Smart Houses	<p>Hashem Almarzooqi, Ibrahim Alzubaidi, Ali Albahrani, Ahmed Almansoori, Maad Shatnawi</p> <p>20 April 2020</p>	<p>2019 International Conference on Computational Science and Computational Intelligence (CSCI)</p>	<ul style="list-style-type: none"> ➤ The proposed systems of the LPG detection system are used for household proposes. ➤ The systems in this paper only detect the gas, activate a buzzer, and send a message. ➤ This system increases the safety level in residential buildings.

6	<p>Gas Leakage Detection System using IoT with integrated notifications -A Review</p>	<p>M Athish Subramanian, Naveen Selvam, S. Rajkumar, R Mahalakshmi, J Ramprabhakar 19 August 2020</p>	<p>2020 Fourth International Conference on Inventive Systems and Control (ICISC)</p>	<ul style="list-style-type: none"> ➤ The gas leakage detection system is implemented by using a sensor and alerting the user for better community support and to produce an efficient way to prevent the disaster to occur. ➤ Also, efficient methods such as use of intel Edison board and the use of arm cortex family for intelligence and several sensors for the detection techniques are identified. ➤ This paper featured a simple yet efficient way in which the problem of gas detection and notifying can be solved by using cloud storage for sending notifications to the receiving user.
7	<p>IoT-based Gas Leak Detection Device</p>	<p>Metta Santiputri, Muhammad Tio 20 December 2018</p>	<p>2018 International Conference on Applied Engineering (ICAE)</p>	<ul style="list-style-type: none"> ➤ The Gas Leak Detection Device can provide information about dangerous conditions such as gas leaks and the presence of fire so that it can be quickly detected by homeowners. ➤ The device is built using NodeMCU and connected to Android-based smartphone using firebase as connector. ➤ The gas leak detection device is able to send notifications to its users using Android bar, alarm or messages.