

# **GAS LEAKAGE MONITORING AND ALERTING SYSTEM**

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## **LITERATURE SURVEY:**

**LIU zhen-ya, WANG Zhen-dong, and CHEN Rong** published on "Intelligent Residential Security Alarm and Remote Control System Based On Single Chip Computer" 2008 .This covers intelligent residential burglar alarm, emergency alarm, fire alarm, toxic gas leakage remote automatic sound alarm, and remote control system.The technology has the ability to activate an automatic alarm that calls the police hotline on its own. It can also be a voice alarm and shows the location where the alarm was received. Remote power management is possible with this smart security system.

**LIU zhen-ya, WANG Zhen-dong, and CHEN Rong** published on "Intelligent Residential Security Alarm," 2008 are intelligent residential burglar alarm, emergency alarm, fire alarm, hazardous gas leakage remote automatic sound alarm, and remote control system.The project put out the issue of a GAS container running out of gas, which is the most prevalent one we encounter on a daily basis. This document is being presented to raise awareness of the decliningto order gas using IOT and to determine the volume of the gas in the container. The booking or order for gas is being the continuous weight measurement is carried out with the aid of IOT and a load cell, which is with a microcontroller interfaced (to compare with an ideal value). It has even been added for convenience.with RF TX and Rx devices that provide the same data. In terms of the safety of We have a MQ-2 (gas sensor), an LM 35 (temperature sensor), and a gas container in the kit.

In this research, we suggested a wireless sensor network (WSN) prototype to track andin a complex interior environment, find gas leaks. In particular, a mobile node is travelling across a structure to track any carbon dioxide (CO<sub>2</sub>) leaks, supporting and showing the level and thethe leak's exact location. The benefits of cognitive technology were demonstrated all through the demonstration.Multichip routing and networking are investigated.

Many reviews of gas leakage detection methods have been published in the past, either as part ofresearch articles or technical reports on specific leak detection techniques and other gas-related topics.

**A. Mahalingam, r. T. Naayagi, and n. E. Mastorakis** published an affordable gas leakage detector's design and implementation are presented. They provided solutions to numerous issues with earlier gas leak detectors. They stated that a number of standards, including IEEE, BS5730, and IEC, have been developed for the design of a gas leakage detecting system. The recommended UK safety standards have been used for this project. The primary purpose of the suggested alarm system is to find LPG leaks, which are most frequently found in residential and commercial buildings. The technology detects the amount of leakage in addition to the presence of gas (gas leak).

**B. B. Did paye and Prof. S. K. Nanda**, discussed their work on leakage detection and a review of the "Automated unified system for LPG employing microcontroller and GSM module." their piece offered a cutting-edge and creative method for automatic, preventative, and detection of LPG leaks scheduling a refill. In advance, the technology offers automatic LPG regulator controlling if When a leak is found, the system will automatically shut off the power supply's main switch. So it's helpful to avoid the blast and detonation.

**Srinivasan, Leela, Jeya bharathi, Kirthik, and Rajasree** discussed the detection and control of gas leaks. In this study, gas leaks that cause fatal flames have emerged as a major issue in homes and other settings where domestic gas is utilised and handled. In addition to shutting off the gas supply valve, it also warns the subscriber via the alarm and the status display.

**Hitendra Rawat, Ashish Kushwah, Khyati Asthana, and Akanksha Shivhare** in 2014 created a framework and provided security measures against criminals, spills, and fire mishaps. When this happens, their deliver SMS messages to the assigned crisis number.

**P. Meenakshi Vidya, S. Abinaya, G. Geetha Rajeswari, and N. Guna**, "Automatic LPG detection and hazard.The real-time gas monitoring and leak detection system were proposed in the article "controlling" published in April 2014.

**Ch. Manohar Raju and N. Sushma Rani** on 2008 saw the introduction of an android-based autonomous gas detection and indication robot.The prototype they have suggested shows a small mobile robot that can find gas leaks in dangerous areas. When there is a gas leakage in a certain location, the robot promptly reads the data and sends it to an Android mobile device using Bluetooth. We create an Android application for smartphones running the Android operating system that can immediately

receive data from robots over Bluetooth. Every time a gas leak occurs, the programme alerts us with an indicator, and we can use text or voice instructions to direct the robot's motions when it is connected to Bluetooth. The earlier mobile robots are built on a variety of different technologies.

**Pal-Stefan Murvaya and Ioan Sileaa** (2008) described numerous methods for detecting gas leaks in their survey on gas leak localization approaches. They implement an old or novel method to find the gas. The non-technical, hardware-based solutions that are proposed in this study aim to consist of active, visual, and acoustic approaches. In their study, they provided a wealth of gas pipeline leak detection methods that are available. Since their invention, some methods have undergone. The development of the initial proposal and some new ones was prompted by improvements in sensor fabrication and processing power. Each detection technique does, however, have benefits and drawbacks. Each category of detection techniques has some benefits and drawbacks in common. For instance, all foreign methods.

**Falohun A.S., Oke A.O., and Abolaji B.M.** (2016) proposed their method for MQ-9-based integrated circuit-based harmful gas detection. They essentially employed an embedded design in this switches, relays, solenoids, LEDs, tiny or bespoke LCDs are examples of common input and output devices. Radio frequency gadgets, displays, and sensors for information like temperature, humidity, light intensity, etc. The majority of embedded systems lack a keyboard, screen, discs, printers, or any other recognizable input/output (I/O) devices, a personal computer and possibly a device for human connection. The variety and quantity of detectors, as well as Depending on the owner's property, one will choose a particular sort of fire alarm system. protection objectives, property value, and owner's insurance requirements.