Gas Leakage Detection System Using Arduino and GSM

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Abstract: *Gas leakage is one of the major causes of accidents in homes, industries, and laboratories. Leakage of LPG, methane, or other combustible gases can lead to fire hazards, explosions, and health risks. To prevent such accidents, an efficient gas detection and alert system is necessary.*

This project presents the design and development of a Gas Leakage Detection System using Arduino and GSM module. The system continuously monitors gas concentration using an MQ gas sensor.

When the gas level exceeds the predefined safety threshold, the system activates an alert mechanism including a buzzer/LED indication and sends an SMS notification to the registered mobile number using a GSM module. The system is low-cost, reliable, portable, and easy to install. It can be used in homes, industries, and commercial areas to enhance safety and prevent gas-related accidents..

Keywords*: Gas Leakage Detection, Arduino Nano, MQ Gas Sensor, GSM Module, Safety System, SMS Alert*