

# Development of Gas Leak Detection and Location System Based on IoT

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**Abstract:** Leakage of gas is a major issue in the industrial sector, residential buildings, and gas-powered vehicles, one of the preventive methods to stop accidents associated with gas leakage is to install gas leakage detection devices. The focus of this work is to propose a device that can detect gas leakage and alert the owners to avert problems due to gas leakages. The system is based on a microcontroller that employs a gas sensor as well as a GSM module, an LCD display, and a buzzer. The system was designed for gas leakage monitoring and alerts with SMS via an Arduino microcontroller with a buzzer and an MQ2 gas sensor. The circuit contains a Microcontroller MQ2 gas sensor, buzzer, LCD display, and GSM module, when the sensor detects gas leakage it transmits the information to the Microcontroller while the microcontroller makes a decision and then forwards a warning message to the user as SMS to a mobile phone for decision to be taken accordingly. The output of this research will be significant in averting problems associated with gas leakages now and in future.

**Keywords:** Gas Leakage

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