

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELAGAVI-590018**



Mini Project Report On

“Gas Leakage Call Alert using GSM SIM Module”

A report submitted in partial fulfillment of the requirements for

MINI PROJECT

In

**Computer Science and Engineering (IOT , Cyber Security including Blockchain
Technology)**

Submitted by

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(IOT , CYBER SECURITY INCLUDING BLOCKCHAIN TECHNOLOGY)**

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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CERTIFICATE


This is to certify that the Project entitled **“Gas Leakage Call Alert using GSM SIM Module”** has been successfully completed by

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the bonafide students of Department of Computer Science & Engineering (IOT , Cyber Security including Blockchain Technology), Alva's Institute of Engineering and Technology in **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (IOT , CYBER SECURITY INCLUDING BLOCKCHAIN TECHNOLOGY)** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.



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ABSTRACT

Gas leakage is a serious safety concern that can result in fires, explosions, and health hazards. To mitigate such risks, this project proposes a gas leakage detection and alert system using a GSM SIM module. The system continuously monitors the environment for harmful gas concentrations using a gas sensor. When gas leakage is detected, it triggers an alert mechanism that sends a phone call or SMS notification to a predefined mobile number, enabling timely preventive action.

The system comprises a gas sensor (such as MQ-5 or MQ-6) that detects combustible gases like LPG, methane, or propane. The sensor output is processed by a microcontroller, such as Arduino or PIC, which serves as the system's control unit. If the gas concentration exceeds a safety threshold, the microcontroller activates an alarm through a buzzer and LED indicators for on-site alerts. Simultaneously, the GSM SIM module initiates a call or sends an SMS to notify the user remotely.

This project offers several advantages, including real-time monitoring, **remote alert** capabilities, and cost-effectiveness due to its use of readily available electronic components. It ensures that users receive instant notifications even when they are away from the premises, reducing response time during emergencies. The system's scalability allows for future enhancements, such as integrating IoT features or connecting to mobile applications for advanced monitoring.

The gas leakage call alert system is suitable for residential homes, industrial facilities, and commercial establishments like restaurants and hotels. Its ability to provide early detection and immediate notification significantly enhances safety, helping to prevent accidents and save lives. This project demonstrates a practical, efficient, and reliable approach to gas leak detection and alerting, emphasizing its importance as a modern safety solution.