GAS LEAKAGE MONITORING AND ALERTING SYSTEM

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INTRODUCTION:

The world has been moving at a rapid pace to adapt the most advanced technologies and connect anything, which means everything. Various establishments such as hotels, canteens, and industries use flammable gases such as LPG, carbon dioxide, ammonia, and others to provide the best hospitality services to their customers. The use of these gases has undoubtedly made technologies smarter, but it also introduces a risk factor that poses a threat to and damages life. As a result, safety becomes a serious concern.

Due to this factor, a gas leaking monitoring and alerting system is required at such accident-prone locations so that continuous monitoring of any type of leakage could be detected regardless of human senses. The designed system continuously monitors the surroundings for any leakage and alerts the user. It alerts the user about environmental conditions such as temperature and gas level using an Ethernet shield module and an Android application.

The Internet of Things (IoT) is a futuristic technology that proposes the interconnection of devices and the internet. Because safety is a top priority, the proposed gas detection system employs IoT to detect leaks and alert the user to prevent them. Because the gases are toxic, they must be monitored in such a way that any increase in their level is detected and appropriate precautions are taken.

OBJECTIVE:

The primary goal of the gas leakage monitoring system is to detect malfunctions in the pressurised gas system in order to prevent the accumulation of gases and thus the

explosion. Our gas detection system not only continuously monitors the surroundings, but it also prevents further gas leakage in the environment, reducing the risk of fire. The gas detection system not only continuously monitors the surroundings, but it also prevents further gas leakage in the environment, reducing the risk of fire. This integrated system will take IoT to the next level and will undoubtedly assist people in meeting their business requirements.

In today's world, safety is critical, and certain solutions must be implemented in places of work and residence. Working or living in hazardous conditions, whether with electricity or oil and gas, necessitates certain safety protocols. The gas leakage detection system can be optimised for toxic gas detection while also being upgraded with smoke and fire detectors to detect the presence of smoke and fire. It is critical to ensure worker safety, but it is even more critical to use the appropriate technology.

LITERATURE SURVEY:

The purpose of the chapter is to review with the aid of sensors, electronics, software, and connection, physical objects can communicate through the networking of "things" known as the Internet of Things (IoT). There is no need for human involvement with these systems. The Internet of Things aims to simplify life by automating all the little tasks around us. As much as IoT aids in automating processes, its advantages can also be extended to improve the current safety requirements. In today's environment, safety is crucial, thus it's essential that good. Safety systems must be put in place in workplaces and educational facilities. This project alters the current. This system, which is employed in homes and workplaces, is a safety model that is installed in industries.

The safety model now utilised in industries is modified in this study, and it can also be applied in households and offices. Although quite precise, the conventional gas leakage detector systems miss a few things elements that affect notifying the public of a leak. As a result, we have utilised IoT technology. Create a gas leak detection device for society that uses smart alerting methods that involve sending text message sent to the relevant authority and a data analyst who can analyse sensor readings.

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