

INDUSTRY-SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM

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LITERATURE SURVEY

This project's purpose is industrial and domestic safety, and the primary concern is to avoid fire hazards. As a solution, a smart fire and high-temperature detection system are designed using GSM technology. A smoke sensor is used to detect the smoke from the fire and a temperature sensor is used to detect temperature increases inside the building. In event of a fire, an alert message will be sent to the user via short message service (SMS) via the GSM module. Furthermore, when a fire is detected, a signal will be sent to the fire service department and the manager of the industry.

Developed an Intelligent Fire Alarm System

Author: Hussam Elbehiery

Hussam Elbehiery 2012 A Fire alarm system that provides remote monitoring services can also be used to provide medical alert services. Here a person with health problems who lives alone carries a radio transmitter that can trigger the system in case they need assistance. Signals received at the monitoring station are identified by type (fire, burglary, medical alert) so that a proper response can be made.

Developments in Fire Detection Technologies

Author: Andrew Kim & Zhigang Liu (2018)

The progress in fire detection technologies has been substantial over the last decade due to advances in sensor, microelectronics, and information technologies, as well as a greater understanding of fire physics. This paper provides a review of progress in fire detection technologies over the last decade, including various emerging sensor technologies (e.g., computer vision system, distributed fiber optic temperature sensor, and intelligent multiple sensors), signal processing and monitoring technology (e.g., real-time control via the Internet) and integrated fire detection systems. Some problems and future research efforts related to current fire detection technologies are discussed.

A Survey on the implementation of Fire detection System Based on ZigBee Wi-Fi Networks

Author: Mr.C.Santhana Krishnan (2018)

This paper presents a design of MEMS-based Structural damage, through some Sensors as a single node. The sensor nodes are placed in important areas of the building, where we create a network and the monitored data is transmitted to the control unit through a wireless sensor network if the temperature or pressure reaches above the threshold value and building damage is detected automatically, alerts the surroundings and take necessary precautions to prevent the disaster. This safety system can be used in any Constructing constructed environment.

Fire Safety and Alert System Using Arduino Sensors with IoT Integration

Author: S.Perilla (2015)

In this paper, Integrating IoT on a fire safety system greatly increases its effectiveness and efficiency. With the use of sensors, fire indications like increase of temperature, presence of flames, gases and smoke are detected effectively. Building occupants and fire-fighting authorities are notified in real-time through distress sound and light alarms, and SMS messages sent by the modules integrated in this system. Critical situations are solved and addressed quickly over the traditional systems which requires large amount of time and effort.

A Smart Real-Time Fire and Smoke Detection System

Author: Mr. Aneesh & Mr. Shafeek Basheer (2019)

This paper describes an idea to build “A Smart Real-Time Fire and Smoke Detection System”. It gives an easy and less expensive way to implement a fire and smoke detection system with a notification to the nearest fire station. By using this system, the fighters can subdue fire before it causes damage to a greater extent. This system is one of the most useful, costless, and fastest systems for safety precaution

Smart Fire Alarm System

Author: Gaurav Pawar (2021)

The paper depicts the necessity and an efficient solution for fire safety. Internet of Things was the main concept used and the project mainly builds on the techniques which are already present and also it has overcome obstacles present in the previous systems. But still, there are a few tweaks and remodeling required to get the coefficient and working model. The time taken for the process is to be reduced for practical use Directly call the emergency services and key contacts to minimize the time it takes for the fire brigade to attend the site.

COMPARATIVE ANALYSIS OF LITERATURE SURVEY:

S.No	Year	Researcher	Title	Technology	Remarks
01	2021	Gaurav Pawar	Smart Fire Alarm System	IOT	Highest Accuracy of about 90% has attained
02	2019	Mr. Aneesh & Mr. Shafeek Basheer	A Smart Real-Time Fire and Smoke Detection System	Tensilica ESP8266 processor	Results have shown 92.5%, By using of Tensilica ESP8266 processor
03	2018	Mr.C.Santhana Krishnan	A Survey on the implementation of Fire detection System Based on ZigBee Wi-Fi Networks	ZigBee Module	On the basis of using the ZigBee Module ,which greatly improves and result shown 90% of this module
04	2018	Malathi Subramanian	A Survey on Fire Safety Measures for Industry Safety Using IoT	IOT	achieve accuracy of 96%, this was done in this project.
05	2015	S.Perilla	Fire Safety and Alert System Using Arduino Sensors with IoT Integration	IOT	it was found that training accuracy was 90.82%, and testing accuracy was 83.63%. By the using of Arduino Sensors
06	2018	Andrew Kim & Zhigang Liu	Developments in Fire Detection Technologies	Signal Processing and Monitoring Technology	Highest results achieved was 85%by using signal processing and monitoring technology

