**PROJECT TITLE:**  FIRE ALARM USING INDUSTRIES

**TEAM MEMBERS:**

* BALAJI.P (TEAM LEADER)
* AKILAN.A
* DINESH.S
* ARUN.R

**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.

**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.

**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.

**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.

**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.

**TABULATION FOR LITERATURE SURVEY :**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.NO** | **Year** | **Researcher** | **Title** | **Technology** | **Remark** |
| 01 | 2021 | Gaurav Pawar | Smart Fire Alarm System | IOT | Highest Accuracy of about 90% has attained |
| 02 | 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 |
| 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 | 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 |