Project Expo

on

Smart Rescue Alert System

GUDLAVALLERU ENGINEERING COLLEGE

COMPUTER SCIENCE & ENGINEERING

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Abstract

We used to provide the "Rescue alert management system" for the society and government sector. This model is introduced based on security provenience for the people who think that security costs more.

Why Smart rescue alert system?

A security system is there to protect you and raise the alarm in a big emergency like a fire or a break-in. It makes itself useful every single day.

The word **rescue** saves (someone) from a dangerous or difficult situation.

In an emergency, the smartest thing of all is to get help immediately. A smart security system takes care of this for you.

Some people may not be spending more money up on security system. The use of this Rescue Alert System in this paper is affordable and easy to install.

Objective

Provides safety from threats that can be caused due to leakage of gas or increasing of temperature in case of fire and provides alert from heavy rains.

In this system the alarm is fired when the temperature goes above a predefined value, the user is notified through coding about the alert.

The main objective of this model is to use raspberry pi (which is a minicomputer) and store our coding in that raspberry and use it for notification alert.

We use this model in banking systems and for any government offices for better security.

We use this model to reduce crash levels and to reduce loss property.

Programming Language

- Python Language

Platform

- Node-red
- IBM Watson IOT

Hardware Requirement's

- Raspberry PI 3B+
- Rain detector
- Temperature detector
- Distance detector
- Sound detector
- Tracking detector
- Flame detector
- Light detector
- Touch detector
- Buzzer module

NODE-RED

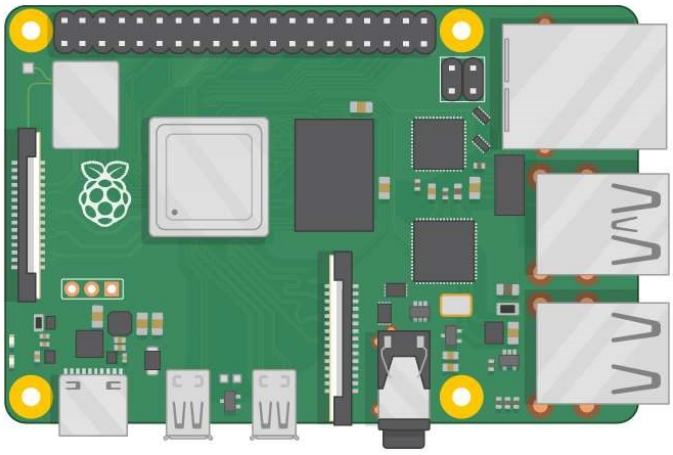
Node-RED is a flow-based development tool for visual programming developed originally by IBM for wiring together hardware devices, APIs and online services as part of the Internet of Things. Node-RED provides a web browser-based flow editor, which can be used to create JavaScript functions.

IBM Watson IoT

Watson IoT Platform. A fully managed, cloud-hosted service with capabilities for device registration, connectivity, control, rapid visualization and data storage.

What is Raspberry PI?

The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python.



How it works?

The Raspberry Pi board comes equipped with an SD card. This slot permits us to insert an SD card and that can use it as our devices. The SD card is a main storage device for raspberry pi board like a hard disk of a personal computer. The bootable Linux operating system is loaded onto the card, you are planning to use. The raspberry pi supports Linux, Mac operating systems. You can select one OS; you will need to write it to an SD card using a Disk manager application.

Expiation for each detector:

Rain detector:
The rain detection module detects rain on the board. Place the rain detection board in the open air. When it is raining, the rain detection module will sense the raindrops and send signals to the Raspberry Pi.

Temperature detector:
A module with a temperature/humidity sensor type DHT11, Temperature range 0 - 50°C (+/-2°C), Rel. humidity: 20-95% (+/-5%), Supply voltage: 3 to 5.5V. With a built-in 10 K ohm pull-up resistor.

Distance detector:
In air, sound travels at a speed of 343 meters per second. An ultrasonic distance sensor sends out pulses of ultrasound which are inaudible to humans and detects the echo that is sent back when the sound bounces off a nearby object. It then uses the speed of sound to calculate the distance from the object

Sound detector:

Sound sensor is a component that receives sound waves and converts them into electrical signal. It detects the sound intensity in ambient environment like a microphone.

Tracking detector:
The infrared tracking sensor uses a TRT5000 sensor. The blue LED of TRT5000 is the emission tube and after electrified it emits infrared light invisible to human eye. The black part of the sensor is for receiving; the resistance of the resistor inside changes with the infrared light received

Flame detector:
A flame sensor performs detection by capturing infrared rays with specific wavelengths from flame. It can be used to detect and warn of flames.

Light detector:
A photo resistor is a light-controlled variable resistor. The resistance of a photo resistor decreases with increasing incident light intensity

Note : Father we provide water level, air quality and etc

THANKU YOU