

Smart Security Monitoring System Using Raspberry Pi

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ABSTRACT

CCTV-based security systems are not real-time of the fact that the alert goes to the proprietor after the episode happened except if they are at home during the occurrence. To conquer this issue, numerous specialists are creating financially savvy uniquely based security system, which are reasonable for everybody. The vast majority of these systems utilize a Passive Infrared (PIR) movement sensor for movement discovery. In the event that an Intruder or unapproved people go into our zone the PIR Sensor identifies the individual action then the security system catch the picture of the unapproved individual and also gives real time alert SMS to the authorized person after the real time SMS alert the security system gives the buzzer sound. The picture will be caught utilizing Pi Camera which is joined to the Raspberry Pi. The caught picture will be sent to the approved individual by means of g-mail by the utilization of inbuilt WI-FI module in the Raspberry Pi board. The real time alert SMS is sent using the WAY2SMS which is connected through the internet. After completion of all these activities the buzzer will be activated.

Keywords: *Raspberry Pi 3, buzzer, Pi camera, PIR sensor, SMS alert, Wi-Fi module, way2sms*

INTRODUCTION

Beginning from little houses to enormous enterprises, surveillance assumes essential job to satisfy our wellbeing perspectives as Burglary and robbery have consistently been an issue. In huge enterprises individual security implies observing the individuals' changing information like exercises, conduct to ensure, managing and affecting confidential details. Surveillance implies looking out for from a separation by methods for electronic equipment, for example, CCTV cameras yet it is costly for ordinary residents to set up such sort of system and furthermore it doesn't educate the client right away.

LITERATURE SURVEY

IOT Based Home Security System Using Raspberry Pi 3[1]

This is a report about a smart security system has been design and developed

Raspberry pi 3, pi camera and PIR sensor .the user can get alerts anytime and anywhere through email on smart phone and laptop. Whenever any unknown or suspicious movement is detected, its gives loud alarm .Hence, the design system successfully prevent access to any unknown person entering the home.

Smart Surveillance Monitoring System Using Raspberry Pi and PIR Sensor[2]

This paper manages the structure and execution of smart surveillance monitoring system utilizing raspberry pi and PIR sensor for cell phones; it builds the use of mobile technology to give basic security to our homes and for other control applications.

IOT Based Raspberry Pi Home Security System Using Email and SMS Alert[3,4]

There are numerous kinds of good security

system and cameras out there for security a low cost simple raspberry pi based gatecrasher alert system which alert through email and furthermore send picture of suspect and sends a notification through SMS when motion detected and buzzer activated.

METHODOLOGY[5]

Working of this project is very simple. A PIR sensor is used to detect the presence of any person and CMOS camera is used to capture the image when the presence is detected. Whenever anyone or intruder comes in range of PIR sensor, PIR sensor triggers the CMOS camera through raspberry pi. Raspberry pi sends command to CMOS camera to capture the picture and save it. After it, raspberry pi creates a mail with captured image and send it to the authorized person .Here the picture are save in raspberry pi with a time and date of entry. As the motion detected buzzer activated and it sends a SMS to the authorized person. The point is to make a smart surveillance system which can be checked by proprietor remotely through android application. As it is associated with the system with IOT, framework will send the push notification to android gadget when an interruption is recognized inside the room. It is required to create and execute and moderate minimal effort web-camera based surveillance system for remote security checking. Approved client can access to their checking system remotely by means of web with the utilization a cell phone and screen the circumstance on application. This whole work is done on raspberry pi with Raspbian operating system ported on it. Surveillance System comprises of mostly two sections:

Hard-Wired Surveillance Systems

These frameworks use wires to associate the cameras, movement indicators, power

supply and LAN link with the pi.

Remote Access Systems

These systems have the capacity to screen and control security systems from an area away from the surveillance territory through android gadget.

CONCLUSION

The smart security system has been aimed to design in such a way that it can fulfill the needs of the user for particular surveillance area. It has endless applications and can be utilized in various situations and situations. For example, at one situation it very well may be utilized by any individual working in industry to know about the movement being occurred at their own working spots, in their nonattendance, while at another occasion it tends to be utilized for spy purposes at bank lockers, storage houses. Another application is to give data to the client about what's going on in surveillance region by notice.

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