Realization of Elegant Security System for Women and Children Safety

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Abstract. Security has become an immense issue wherever all through the world. Concerning human security, the proposed structure can be applied to make it powerfully astute, reasonably secure, and mechanized. Utilizing two sensors bend and pyroelectric infrared the structure was made both really and therefore began. Considering the sensor, the structure turns ON and detects the difficulty area. By at that point, the district is sent to some picked numbers correspondingly as spared in the server. This work joins information assortment by utilizing sensors. To transmit to proliferate together server and move to the site Raspberry and GSM are utilized. Using this structure, individuals of any age can be profited. The structure can be revived and enhanced by further increases of highlights. Unequivocally when a human will reshape his stable finger following to conflicting with any sort of hazard, the resister estimation of twist will be changed and the structure will be on. By at that point, not just SMS including locale will be sent to the predetermined numbers yet likewise, it will be moved and spared as still pictures to the site.

1. Introduction

Productive security framework utilizing IoT novelty, as it says everything regarding security for intellectually cripple individuals, youngsters and ladies in each unprotected spot. For exhibition reason two fundamental sensors Bend and Piezoelectric [6] were utilized here. Be that as it may, sensor system can be deftly extended and contracted by the prerequisites of arrangement. It tends to be utilized consequently utilizing the sensor and following the area with the assistance of GSM and through Short Messaging Service and cloud availability. Besides, factual information assembled and can be utilized by government experts for offering equity to the person in question.

The objective of IoT was to empower things to be associated whenever, wherever, with anything and anybody preferably utilizing any way/arranges one structure is made using fast mixed sort only-chip C8051F120 and is recognized by the usage of vibration sensors [6]. The system remains in contact through the GSM module improvement of GPS/GSM [13] based Vehicle Tracking and Alert structure.

Web of Things is only an arrangement of devices, vehicles, home devices and various things embedded with equipment, sensors, programming, actuators, and accessibility which enable these things to interface and switch data. In the previous history a great deal of examination work occurred, from where the possibility of this venture came. Ongoing following and vehicles the executives had been a field of enthusiasm for some specialists. A great deal of examination work had been accomplished for this scheme.
1.1 Proposed model Flow chart

This scheme focuses on IoT which is a novel development to make city as an elegant one with different applications. The main focus of this here is to design and implement a stumpuy cost scheme to give individuals security by Bend and pyroelectric infrared sensor [6] through a Short Messaging Service. This system as shown in Fig.1. Consists of Bend sensor, Raspberry pi, a Camera, a pyroelectric Infrared sensor (PIR) sensor, a Pyroelectric Light Sensor (PIR) module and a Microphone.

![Flow chart diagram]

Figure 1. Proposed model Flow chart

The Raspberry pi gathers the information from sensor and sends it to Global System for Mobile (GSM). Bend sensor enact when an undespyro electrical force it detected. At that point it turns ON the gadget which offers area to the ideal portable number that is put away in the gadget. By using camera and mouthpiece, the pictures and clips are caught and send away with the area to that number alongside area. At that point this all data is transferred in the site.

2. Proposed Block Diagram

From the outset the framework gets power gracefully from source. In the wake of getting signals from the Bend sensor the framework begins to work. At the point when the sensor gets change of register esteem it will begin to compute the register esteems on the off chance that it is changing ceaselessly or not, at that point the sensor will impart a sign to microcontroller. At the point when the VR module gets voice code it will impart sign to microcontroller then it will impart a sign to the hand-off unit and the unit imparts a sign to an Amplitude Shift Keying (ASK) Radio Frequency (RF) transmitter segment and it imparts a sign to RX module to begin the camera. The sensor and VR information is sent by a GSM to the site, as appeared in the beneath figure.
3. System Simulation

3.1 Simulation of Bend sensor in proteus 8
The replication of the Bend sensor is showed up in Fig.3. For different opposition numbers, the wound edge is dissimilar to. For different wound Angle or opposition numbers, the Bend sensor [6] will be begun and confer sign to the whole structure.

![Simulation of Bend sensor in proteus](image)

**Figure 3**: Simulation of Bend sensor [6] in proteus

3.2 Simulation of GSM:
The GSM module as showed up in Fig.4. is planned as a Data Communication Equipment, which follows the standard Data Cpyroelectriccuit ending Equipment(DCE)- Data Terminating Equipment(DTE) affiliation. The GSM Modem and the DTE are related through the going with the sign which is appeared in the figure 4. It backings a Baud rate ranges from 1200bps to 57600bps.
3.3 Receiver: The GSM module supports Data Terminal lines of 1200, 2400, 4800, 9600, 19200, 38400 and 57600 bps which are transmitted from signal line and the auto baud will be enabled for restore factory settings.

3.4 Transmitter: propel data to the RXD signal line of the Data Terminating Equipment.

4. Simulation Result
To the selected numbers GSM section is able to send the message.

Figure 5. Result of simulation
The Simulation result of GSM model is successful and is seen in the above figure.

5. Implementation of hardware
5.1 Bend Sensor:
The mechanism of bend sensor depends on the resistive carbon elements.

Figure 6. Circuit realization of bend sensor
As shown in Fig.6, the bend sensor is connected with any body part and the sensor will be ON, on touching/pressuring the body parts and sends signal to Raspberry pi, which will be turned ON.
5.2 Camera section:
An association pixie camera is connected to Raspberry pi [7] [3][9] as appeared in Fig. 7. This camera can catch pictures at daytime as well as evening. There is a power sensor and infrared Light Emitting Diodes which will be turned ON precisely when the force of the light is fallen at the limit.

![Figure 7](image-url)

Figure 7. Connection of camera section

An association pixie camera is related to Raspberry pi. The principle highlight of this camera is, it even catches pictures around evening time. In the event that the recognized light is lower than the limit esteem, the brilliance sensors [6] and LED's are turned ON consequently. The camera can catch pictures if high goals in Joint Expert Photographic Group (JPEG) design and send it sequential port. There will be four pin connector, which is utilized to interface and two pins are utilized for the force flex sensor[1][5] (+ 5V and Ground). The other two are utilized for the sequential port (accepting and Transmitting).

5.2 Designing of a Website
For this model, a site is arranged as showed up in Fig.8. To shift and accumulate everything that the camera section and Vpyroelectrical Reality section will witness and these information will be passed to the server with the assistance of GSM.

![Figure 8](image-url)

Figure 8: Design of Website

The programming dialects like HyperText Markup Language (Html-5) and Cascading Style Sheets (CSS-3) were used. Without HTML any program won’t show any site. HTML gives body structure to the site. For the database, we utilized MySql and PHP 7.01 and Java content. JAVA is an item situated language. The site runs with LINUX based web server for security and it fuses email and SMS entrance too.
5.3 The Proposed Circuit
As showed up in Fig.9, the complete mechanism is prepared with a bend sensor, PYROELECTRIC sensor [6], Camera unit, VR unit, GSM, and Raspberry pi. In case the bend sensor gets reached by someone, it will offer a sign to the Raspberry pi and PYROELECTRIC then the full structure with the camera module will be turned ON.

![Figure 9. Implementation of Hardware](image)

Something different, the victim will say "assist me" and the structure with a camera will in like manner be turned ON. Here, the IR sensor is used for helping the camera to turn ON. In the wake of turning on the structure, the GSM module will get a commitment from the camera and send it to the server then the server will save that image or video for extra using.

6. Outcome
The model was fruitful and the execution was done as talked about. The position could be followed and transferred to the site with sound and video gushing as proposed.

![Figure 10. Testing the System](image)

In figure 10. It very well may be seen effectively that a message containing "Help me" is passed to the predefined numbers

7. Conversation
With the assistance of the bend and Virtual reality sensor, the system was made both precisely and genuinely. On the off chance that the individual is in peril, the bend sensor gets actuated by squeezing it and is followed by the GSM module. The information will send to the server as SMS. To spare the information we utilized the camera. The camera spares a few pictures and video documents that incorporate sound too. The information will be spared on the site. By this, we can catch each snapshot of the person in question and naturally transferred to the site. The pyroelectric sensor has
been executed and connected with the Raspberry pi through the VR module. Successfully we spare the information on the site.

8. Conclusion and future scope
Day-by-Day IoT is becoming more demand. Then bend and Pyroeletric infrared sensors are a main fact in this scheme which makes more resourceful and unlike from other study for security. As the project saves the crime events, it became easier. No crime will be hidden. This project becomes more efficient if it is cost-effective. Due to developing technologies, the security will be increased. Most prominent wireless network is. As quick improvements in the research and of Raspberry pi, IoT and sensors makes the system more understandable and efficient. As the system is hardware is very small, it is handy to the victims and invisible to the criminals. Computer model created in Proteus 8 Professionals play an enormous role to know the crash of Virtual reality module. For future the hardware should be reduced as possible as we can to be handy and cost efficient. The power consumption should be as low as possible.

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