

Review: IOT In Smart Wearable Devices

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Abstract: Invention of internet gives us a platform from which we make our life faster, easier and less complicated, now here a new platform is invented called as IOT (internet of things) in which various devices are connected to huge data at any time anywhere, IOT has various applications in different fields so this paper review is based on wearable devices which work on IOT. In today's scenario safety of women is the biggest problem so to minimize this problem we have studied some devices which are used in rings, jackets etc. which work on IOT. Also we have studied an IOT system that includes wearing glass and walking assistant for blind people and we have studied a system that utilizes IOT concepts for detection of accident in two wheelers.

Keyword: IoT, wearable.

I. Introduction

Invention of Internet gives us a platform which makes our life faster, easier and less complicated, now here a new platform is invented called as IOT (internet of things) in which various devices are connected to huge data at any time anywhere, IOT has various applications in different fields so this paper review is based on wearable devices which work on IoT. In today's scenario safety of women is a biggest problem so to minimize this problem we have studied some devices which are used in rings, jacket and etc. Which works on IoT. Also we have studied an IoT system that includes wearing glass & walking assistant for blind people. We have also studied a system that utilizes IoT concept for detection of accidents in two wheelers

II. Safety Using Advance Iot Technologies

2.1 Women Security using Wireless GPS:

As we know the woman's lacking security problems in our society so it is essential and very important to introduce the safety devices for a woman's safety in sectional ways. So some system and process are introduced by IOT to handle such issues. In this paper safety device based on IOT in which the system consists of pulse and temperature sensors which when activated, send values in every 10-15sec to the trained dataset as user women get notification of such odd actions.

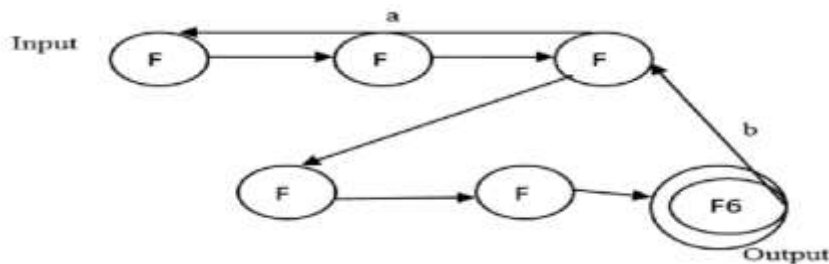


Fig. 2.1 Wireless GPS System

Statistical analysis: Wireless GPS

S be the -children as well as women safety Application as the final set

S = indicate the inputs as D, Q, E

S = D, Q, E

D = D1 - D the details are given Q = Q1, Q2, Q3 . Q-gives the bus which tracked E= E1, E2, E3 . E- gives the button indication on single click as O S = N, C, R

S = F = F1(), F2(), F3(), F4(), F5(), F6() F1 (D) the user details F2 (D) Registration F3 (Q) details by users F4 (Q) gives present location F5(D) gives the users detail F6(E, D) gives notification the operation can be described as shown in figure

2.2 Smart wearing devices using panic buttons for girl’s protection:

This system can be placed in areas like malls, bus stands, railway, stands, footpaths, markets etc. this point in women’s wearing gadgets for their safety. This system consist of some elements that are GSM ,microcontroller, GPS ,sensor and panic buttons the diagram is of smart gadget for women’s safety. This can be implemented in devices or jeweler accessories like metals,watch, bracelets, necklets, wallets, etc. .

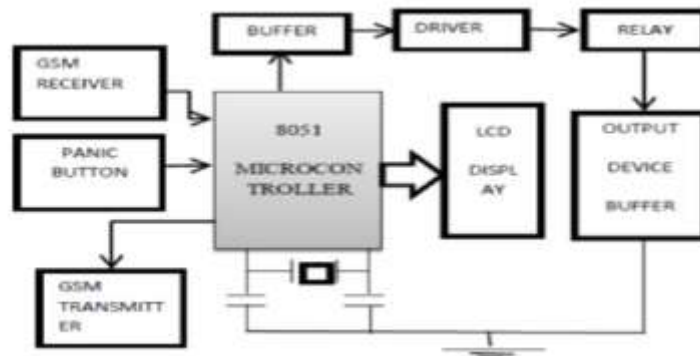


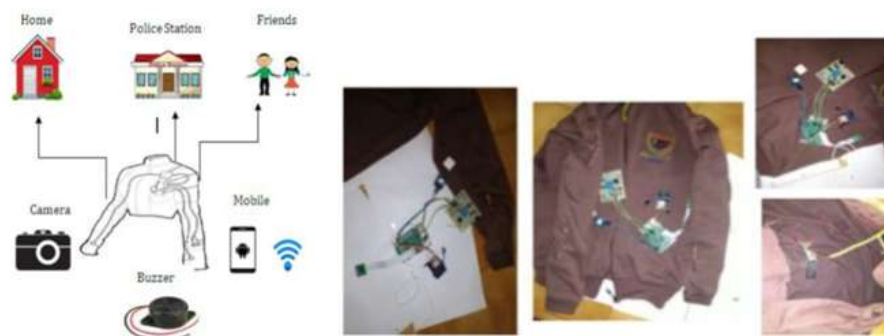
Fig: 2.2 Block diagram of women’s safety gadget based on IOT



Fig. 2.3 Electronic Jewellery

2.3 Electronic Jacket Based on IOT for Security of women:

In this system which is raspberry pi is used as a main part which contains 40 pins. There are buttons provided used to start and the stop the devices. One button is used to GSM,GPS and also buzzer and one button is used to short circuit. When reset button is pressed device will on, it transfer the location to the control room or control unit. The registered device or control unit may be police , family or friends also. Now when attacked on any women is done then at that time by single press of button will on the device , then it send the location of women to the control room . And all the information regarding the woman and attacker there are one button also which is used for short circuit which gives the shock to the attacker and there is a camera which capture the images of attacker[1]



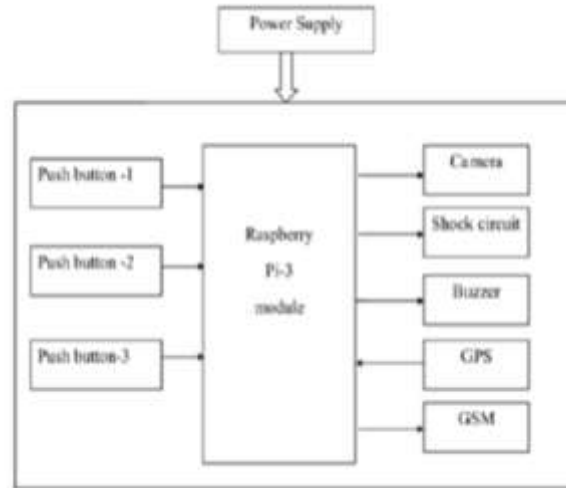


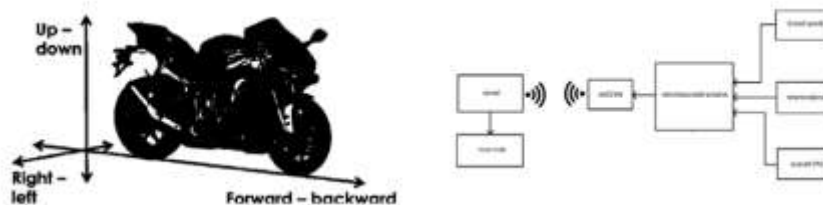
Fig. 2.3 Diagram of Block Women's safety Jacket

III. Smart Helmet

To create an IoT system which helps to detect accidents happening in two wheelers by using microcontroller and accelerometer. This system gives us reliable and accurate response that are happening in two wheelers. It gives information about accidents in two wheelers to the higher authorities and emergency contacts of the rider. Microcontroller gives us the information of accidents which is connected with accelerometer. It send the notification of accident via GSM device. Accelerometer consists of 6 axis accelerometer and a gyroscope this acceleration data is then given to the microcontroller. This system is also consisting of a GSM module which provides us communication with the web server. This system also confirms that the rider has wearied helmet or not. We also get one more system that without wearing helmet bike would not start. By use of this system helmet wearing will be compulsory[3].

IV. Smarisa (Iot Based Ring)

Know a days for the women safety a new device is invented. This is smart ring named as SMARISA which is based on the raspberry pi zero. Simple and portable device we can easily handle it and activate it by simple pressing a button provided on it. It will send the all information about the attacker to the registered and connected contacts and police also. It uses smart phone of victim so no additional hardware is required women's are in the present days not safe outside of home. They feels hesitates in outside they are not able to wear the clothes of there own likes. They are not go to as far as they wants for working and other important need. Its necessary to maintain the safety of women we can use the present technology. now the technology is very advanced and we can use it for women safety. In this paper the smart ring is introduced by a IOT based raspberry pi which is wear able ring.



Its main aim is that to avoid the problems arises of women's and prevent the incident before happening. After the crime it is essential for the evidence also. This device is easy to operate, handle and wear its less risky and immediately call for help. It contains a single button which activate the raspberry pi it will sent the current location of women and images of at that moments. Its basically design for the women's but it can used for old peoples also and a children in most of the times women's going to that cities which is new for them in that cities women can not get help instantly by the family or police. But by this device its easy to deal with the problems of women safety. The main aim is that invent the some use full device to reduce the problems arises

about women safety low cost one board computer made by raspberry pi which is communicate with the camera and the buzzer .Buzzer gives the high frequency for the emotion for the indicate that to public is that victim is in danger camera catch the images of victim . And a single button pressing gives the message to the registered contacts with locations by the use of GPS of her smart phone.

Importance:

- 1)capture the image of criminal
- 2) Improve the probability and accessibility
- 3) Also can prevents the children problems
- 4) Fast response etc[4]

V. IOT In Shoes

In this we are going to introduce the data shoe monitoring based on IOT using the Wi-Fi modules and get the information throw users and interfere with the smart phone application. This contains some resistors and sensors which are spread in the shoes for gait sensing and steps counting of users. It has the different gadgets like Wi-Fi, battery, transmitter, receiver, and internet connectivity etc. There are in different sites of server which contains different features like over load protection and errors detections etc. it will also be detect the emergency situations. Finally we conclude that overall system is defined for counting steps and any emergency detection and provide to safety to the user throw connect to internet by using IOT technology which is wearable device shoes [5].

VI. Conclusion

From above research it is seen that IOT technology can be used for many aspects, like for security, daily equipment and smart device. Paper which we reviewed used different technologies to make devices work on IOT, in which GPS and GPRS techniques are more reliable and efficient in communication. Other such as zigbee and Bluetooth also can be used but both are having limitation of users and coverage area.

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