



WOMEN SAFETY BAND

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ABSTRACT

Nowadays in the world, the basic question comes to every person's mind, day by day the increase in harassment is affecting their safety and security. Not for only Women, There are many Old Age Peoples and Physically Weak Peoples. In this paper we came with a new perspective to use technology for women safety. We have come up with an idea which will change the mindset of every person about Human safety. A day when the media broadcasts more of women's achievements rather than harassment, it's a feat achieved! Since we (humans) can't respond aptly in critical situations, the need for a device which automatically senses and rescues the victim is the venture of our idea in this paper. We are going to build a smart device, which is a combination of multiple components, basically a wearable Smart Device which continuously communicates through the internet with a Smartphone. This generates a message which is transmitted to the smartphone. The software or application has access to GPS and Messaging services which is preprogrammed in such a way that whenever it receives an emergency signal, it can send help requests along with the location coordinates to the nearest Police station, relatives and the people in the near radius who have application. This action enables help instantaneously from the Police as well as family members who can reach the victim with great accuracy.

Keywords: Smart Device, GPS Technology, Sensors, SMS gateway

1. RATIONALE

Women safety is one of the major issues in today's world. The world is becoming so unsafe for women. In today's world, most of the women are stepping out at any time from their house for work. Even though many technologies have been introduced for women still kidnapping, eve teasing and sexual harassment are taking place in our country. In the last few years crime against women has increased to a greater extent. Women are harassed not only in the evening or night but also during day hours at home, working place, shopping etc. There are a number of women who have been afraid of strangers for their safety. Around 80% of the women in our country have fear regarding their safety.

2. INTRODUCTION

Day by day women's safety is becoming a common issue, such apps do exist, and they are equally smart to confiscate the victim's phone. Hence the strategy to switch to an independent hardware is focused in our project. Here we introduce a device which ensures the Protection of women. This helps to identify, protect and messages on resources to help the one out of dangerous situations.. If the comparison result is abnormal then a popup message is sent to women. Main purpose of the system is to provide security and safety. As being an independent nation women are not safe even today. There should be some effective measures for the security of women. Nowadays there are many applications developed for women 's security but the main drawback of these applications is that it requires initial interaction of women and in that situation it is not possible.

.Women safety in India is a big problem. Safety of women matters a lot whether at home, outside the home or working place. It is very true that women in India are given a place of Goddess Lakshmi in the Indian society however we also cannot ignore the negative aspect of women's position in India. Areas like streets, public spaces, public transport, etc have been the territory of women hunters. Safety of women in India is a vast topic now-a-days. We cannot say that women are safe in India by seeing the last few years of crimes against women especially in the national capital. Women generally are afraid to go alone outside. It is a very sad reality of the country that its women citizens are living with fear all time. Personal safety of women has been the topic of importance for every Indian citizen. In proposed system we build the system for If woman is in dangerous situation then emergency message is send to the family member and nearby police station with the GPS location of victim

3. LITERATURE SURVEY

Every system uses GPS and street images to identify the location of the women, those locations are fetched only when she faces such situations, there is no system to send locations periodically, these systems not only send the location to police and official safeguards, these systems can also store information about their friends and family. Hence the location is shared with friends and family also, this increases the possibility to save the women quickly. Most of the systems are mobile applications that are dependent on the mobile network, mobile battery and other technical problems are also there in a mobile application. These mobile applications can't send the locations periodically because they require power and data bandwidth of mobile for other purposes like communication and other activities. Hence a separate device is developed specifically to ensure women 's safety. Charranzhou

proposed a mechanism to find whether the trip ends while traveling or not - traveling by using smartphones based on GPS tracking systems. The author modeled a device using PR (Promoted Recall) technology and data-driven machine language to find the speed, distance, heading direction. These features are used to characterize the smart phone holders and identify the travel point identification. The author has tested PR technology in the random forest and accurately tracked the distance of trip ends. This scheme will take many days to find the location of trip ends.

4. PROJECT CONCEPT AND WORKING

The proposed system is intended to alert the authorities to take immediate action, whenever a woman is attacked. The major factor for the women's crimes is the lack of communication from the person being at danger to the respective concerned authorities. Instead if we provide an option for the women in those situations where they can send the information to their emergency contacts and other officials then the above crimes can be reduced. The proposed system for women's safety consists of an SOS button which can be made available for the women's hand band i.e. it is incorporated in their band by which they can transmit the information to the contacts to which are provided and it also works even if there is no internet. This system consists of a device that can be worn by the person and if she presses the SOS button being available then it sends the information to the family contact number. Now-a-days women security is the main concern in the society. So there is a need to build a system that can respond faster and provide security to the women in problem. In this system we will include comparing of data from the sensors with the training dataset, if variation occurs then message will be send to nearby police, family, friend along with the GPS location to provide the security to the women in danger

EXISTING SYSTEM

In an Existing system when women face a threat, the systems records the image and audio of the current situations and upload to cloud, but precautionary measures were low, Various systems e, GSM and Wi-Fi networks for communications. Most of the systems are mobile applications that are dependent on the mobile network; mobile battery and other technical problems are also there in a mobile application. These mobile applications can't send the locations periodically because they require power and data bandwidth of mobile for other purposes like communication and other activities. Hence a separate device is developed specifically to ensure women's safety. Having this concern in mind many developers have come up with creative applications. Some of such applications are: Codes like *91# is used to provide emergency services, which will alert police control. Free mobile application 'Help me on mobile' to ensure safety of women was launched to assist those who need emergency. These applications need a single click to do this task.

Area of project :

IOT

Features:

- Easy to handle
- Easy to Access
- User-friendly

5. DESIGN CONCEPT

The proposed system is Iot based application. Today women were not allowed to move freely even in the streets without worrying about their security. Parents are worrying about their security which has become the first barrier to send their daughters to work. Day by day the harassment of women increases. We can't change society totally but we can increase the security of girls by using modern technology. The proposed system for women consists of a wearable safety device that is wrist band which operates when woman is in dangerous situation. When women are exposed to harassments in the society. When women face insecure situations, to ensure their safety, If woman is in danger she is press on the sos button of wrist band and then send emergency message is send to the family member and nearby police station with the GPS location of victim.

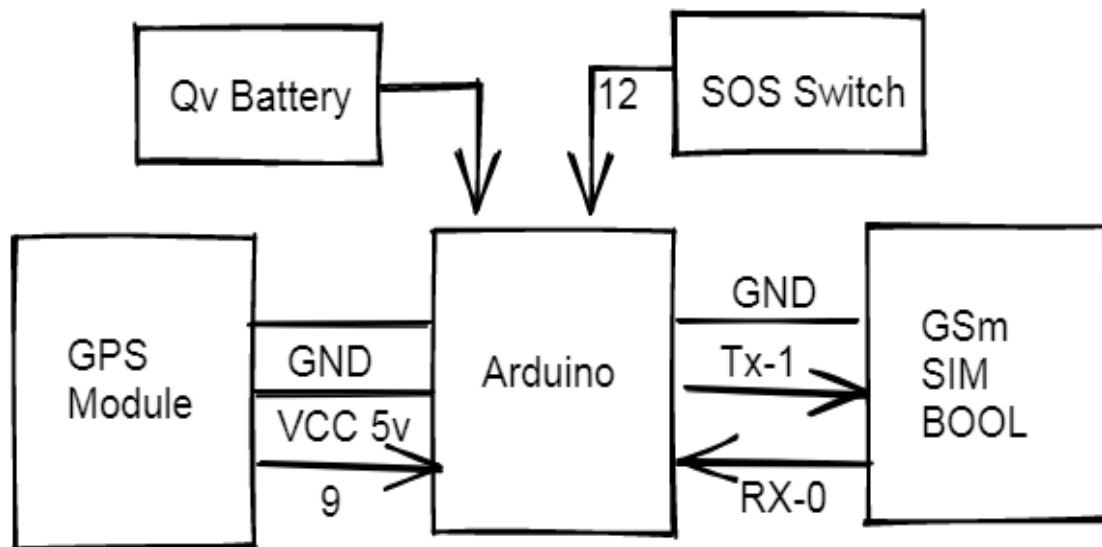
Four Modules are there:

- 1) Smart Band.
- 2) GSM Module.
- 3) GPS Module

Smart Band: Smart bands consist of a sensor, microcontroller. Smart band is connected with the gps and contact numbers.

Gsm Module: GSM is used to transfer the signal from smart band to smart phone and also used to send emergency messages to family members, friends and nearby police stations.

GPS Module: GPS module is used to track the current location of victim with the help of latitude and longitude of receiver

BLOCK DIAGRAM:**Hardware Requirement for Development of Project: (minimum)**

- 1) Arduino Uno
- 2) Sensors
- 3) These devices should have BLE 4.0 connectivity.

Software Requirement for Development of Project: (minimum)

- 1) GPS module(Neo-6M)
- 2) IoT module(ESP8266)
- 3) Accelerometer Sensor(ADXL345)
- 4) Band

Advantages of this Project:

- 1) It is user-friendly
- 2) Improved security.
- 3) Easy to integrate
- 4) It is the safest and fastest method
- 5) Can be used for the safety of children.
- 6) Can be used for the safety of elderly aged people.
- 7) Can be used for the safety of physically challenged people.
- 8) Environmental friendly system

Limitations/Constraints of Project:

- Technical complexity.

Applications:

- This system can be useful for woman's who is in difficult situation

6. CONCLUSION

From the above survey, we analyzed that GPS, GSM and sensors can be used to track only users' nearby locations and can only send alert SMS to limited people. In the existing system, there is a buzzer which alerts people when they are in danger, and a mobile app ensures the safety of women by using a buzzer system to send alert SMS, the user will share location to their family members and SOS service to send the text message. So a new system needs to be developed which can send alert messages when a Woman is pressed on a button on a band. The accuracy level of detecting violation of women can be improved by sensing more. In our system we developed one smart band which contains a sensor and which continuously communicates with the smartphone. This system does not require any user interaction at a time of critical situation. It sends emergency messages automatically to the relatives and nearby police station. Our system is more efficient than all existing systems.

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