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# Security System with Voice Recognition and Autodialing

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**Abstract-**Today in the current global scenario, women are facing many problems like women harassment and many old people suffer with alzheimer's disease. For these problems, we propose to have a device which is the integration of multiple devices, hardware that endlessly communicates with sensible phonethat has access to the web. This paper covers descriptive details about the design and implementation that we have used in our model. In this project, when a woman senses danger she has to just give a voice command to the VRBot or press the trigger of the device. Once the device is activated, it tracks the current location using GPS and sends emergency message using GSM to the registered mobile number and near by police station. It also autodials the number which is saved so that the person on theother side can hear what is happening using microphone and take immediate action. Neuro Stimulator will produce non-lethal electric shock in emergency situations to detect the attacker, buzzer is used as an alarm to alert the nearby people so that they may understand that someone is in need . This device also provides the geofencing feature .

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## Introduction

In Today's World, the safety of women is in danger especially in India. The rate of crimes against womenis increasing at an alarming rate. Many preventive measures have been taken by the government to stop these misbehaving activities but still has not affected the growing rate of these crimes. Women is getting kidnapped at every 44 minutes, raped at every 47 minutes, 17 dowry deaths every day [1]. The fear of harassment against women is not only the condition at outside but it may also happen at homes.Women are not so physically fit as compared to men so in case of a need a helping hand would be a boon for them [2]. Students face incidents like child trafficking and kidnapping, when they are waiting to embark or disembark a school bus[3]. Loaded with security apps for women, your smart phone can help you send

emergency alerts to chosen people and also let people know about your whereabouts if anything goes wrong [4]. Sometimes there might be a situation that when a person had an accident in the late night and there is no one to help them.

In such situation, the person will not be able to tell the situation that he/she facing [5].Nowadaysthough there are many apps and devices evolved for women safety via smart phone which can be activated only by a touch or one click or shake the mobile[6].The main purpose of the project is to provide highly reliable security system for the safety of women. The proposed system is based on Microcontroller and GSM. The basic aim of the system is to develop a low cost solution for GPS based women tracking system. The main objective of the system is to track the current location of the person which has an android enabled mobile by extracting the longitude and latitude of that target person.This device can be fitted in a jacket. It is an easy to carry device with more features and functions. The emergency push button is held to one of the buttons of the jacket. A GPS system is used to trace the current position of the victim and a GSM modem is used to send the message to the pre-defined numbers. This model is also useful for small children's, elderly aged people[7].This paper is organised in a following way ; Literature Review is given in 2, Related work is given in 3,the proposed system is given in 4, the result and conclusion is discussed in 5 and 6 respectively .

## I. Literature Review

Arduino Based Security System for Women, Abhijeet Mane , Manoj Gharge, Omkar Pol , Karan Grover, Prof. Vijaya Chavan In this system there are many components like LEDS, buzzer, shock generator etc. When a woman finds herself in a wrong situation she will instruct the machine so that it can send messages to known five people with her location and the message is immediately sent without any problems. The hardware components are maintained so that there will not be an error also there is a power supply present in it a battery of high quality has been used this system will easily help a woman out to escape from this dangerous situation as it will smartly give GPS means location of a woman and then any known ones of the woman can rush at the location and help her[1].

WOMEN SECURITY SYSTEM USING GSM AND GPS, The main purpose of our project is to provide safety to the women's from the dangerous zone. In this project we are providing facility to secure the women's by providing this kit. As the women feels insecure at that time she can press the button .GPS will calculate the latitude and longitude coordinates of that area. The controller read this value and sends those data to the pre-defined number which is already saved in program[2]. Design and Implementation of Women Safety System Based On Iot Technology B. Sathyasri, U. Jaishree Vidhya, G. K. Jothi Sree, T. Pratheeba, K. Ragapriya Ananda Mohan Ghost et al. Today in the current global scenario, women are facing many problems like women harassment. We propose to have a devicewhich is the integration of multiple devices, hardware comprises of a wearable "Smart band" that endlessly communicates with sensible phone that has access to the web. This paper covers descriptive details about the design and implementation of "Smart band". The device consists of a trigger, microcontroller (ATmega2560), GSM module (SIM900), GPS module (Neo-6M), IoT module (ESP- 12E), Neuron Stimulator, Buzzer and Vibrating Sensor. In this project, when a woman senses danger she has to hold ON the trigger of the device. Once the device is activated, it tracks the current location using GPS (Global Positioning System) and sends emergency message using GSM(Global System for Mobile communication) to the registered mobile number and near by police station.IoT module is used to track the location continuously and update into the webpage. Neuro Stimulator will produce non- lethal electric shock in emergency situations to detect the attacker, buzzer is used as an alarm to alert

the nearby people so that they may understand that someone is in need and vibrating sensor will send the last location in case if the device gets defected. The main advantage of this project is that this device can be carried everywhere since it is small [3].

Advance Woman Security System based on Android Felipe Fernandez et al Security for women has become a major issue as the number of crimes over women and girls increasing day-by-day. This paper describes about women safety and their security by using electronic device to both detect the problem & alert Authorities This paper suggests a new perspective to use technology to protect women. We use an android based smart phone with an integrated feature that alert and provide location based Information. This Document describe GPS and GSM based "Women Security System "that provides the combinationof GPS devices as- well-as provide alerts and message with an emergency button Trigger. Whenever somebody is in Trouble They Only have to press Volume Key Button After that a message alert is sent to Register Contact list and a Voice Call to the Number registered first and give a message "I AM In TROUBLE PLEASE HELP ME" Now a day safety of women is becoming very poor with the help of this Application The project was development in Android Which Graphical User Interface it provide the level of reliability, availability and compatibility [4].

## III. Related Work

3.1 Existing System:

Keeping the same concern in mind many developers have come up with innovative applications. Few of such applications are as follows-

1. VithU App: This is an emergency app initiated by a popular Indian crime television series "Gumrah" aired on Channel [V]. In this app when the power button of the Smartphone is pressed twice consecutively, it will begin sending out alert messages with a link to the location of the user every two minutes to the contacts fed into the app.

2. SHE (Society Harnessing Equipment): It is a garment designed by three engineers from Chennai. This garment has an electric circuit that can generate 3800kv of current which can help the victim to escape. In case of multiple attacks it can send upto 82 electric shocks. Since the fabric is bilayer, the user is not affected. It can also send emergency messages.

## IV. Proposed System

The proposed system is especially for the safety and overcomes the disadvantages of existing system. This proposed system is 'GSM , GPS, Voice Recognition Based Security System'. It consists of GPS , GSM ,Voice Recognition, Neuro Stimulator and an emergency button. The device will provide the position information such as latitude, longitude of person. An emergency button is fixed on the deviceat a particular position. Whenever women is in any kind of trouble then she will press the emergency button and an alert will be immediately sent to the nearest police station and parents. Instead ofpressing the button he/she may use the voice recognition module where the person can give a command and this will lead to activation of neuro stimulator and also it will autodial to the saved number in the program. Then it is the responsibility of police squad to handle the situation.

This project presents an alert system for Women safety detection. The system provides a realizable and efficient. The application is easier to use. The application is normal budget. For user there is no need of external hardware or software to use this application. This application is free for user, which does not affect user's cost


**Fig 4.1 Proposed System Overview**

Figure shows when a woman senses danger she has to just give a voice command to the VRBot or press the trigger of the device. Once the device is activated, it tracks the current location using GPS and sends emergency message using GSM to the registered mobile number and near by police station. It also autodials the number which is saved in the program so that the person on the other side can hear what is happening using microphone and take immediate action.

This will also lead to activation of Neuro Stimulator which will produce non-lethal electric shock in emergency situations to save the victim from the attacker, buzzer is used as an alarm to alert the nearby people so that they may understand that someone is in need and immediately can come for rescue. This device also provides the geofencing features. This feature can be specially used by old people suffering from memory loss or can also be used by children to reach their destination with safety.

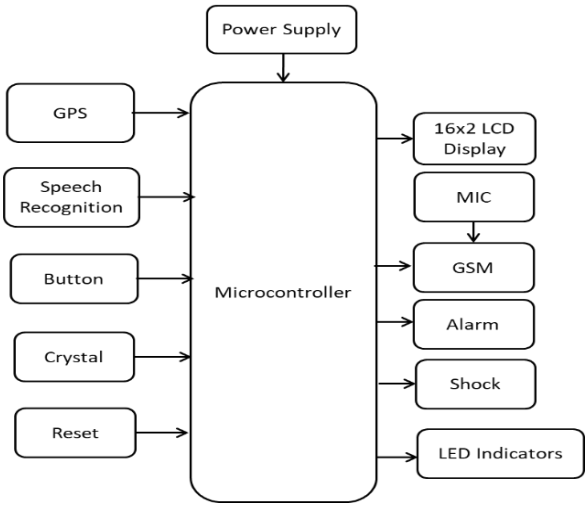


**Fig 4.2 Block Diagram Of Proposed system**

Fig 4.2 shows the GPS module which is used to track the location based on latitude and longitude. The location is sent to the receiver using the GSM module. Speech Recognition system is used to receive the voice commands in case of emergency. We can also press the button for sending the location. As soon as the device gets activated it autodials the number saved in the program and with the help of MIC, only the person on the other side can hear the voice of the victim.

Buzzer is used as an alarm to alert the nearby people so that they may understand that someone is in need. Neuro Stimulator is used to give shocks to the attacker for the personal safety. LCD is used to display the message

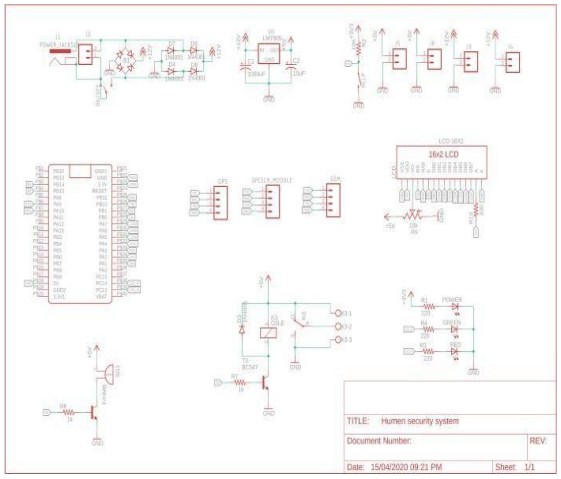


**Fig 4.3 Circuit.diagram of Proposed Model**

## V. Result

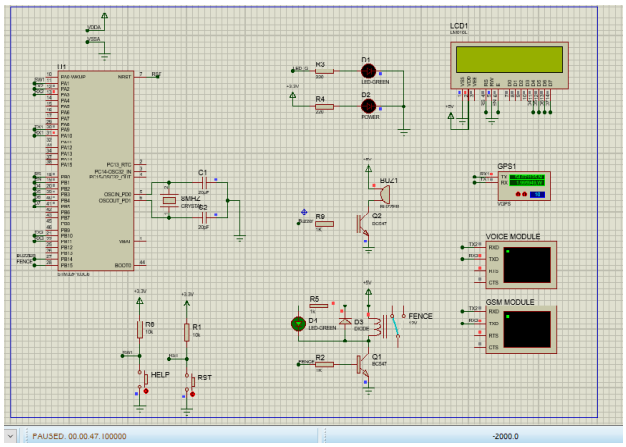


**Fig 5.1 Simulation of Proposed Model**

Figure shows the simulation of interfacing between the GSM, GPS, Voice module and STM32f microcontroller. Programming of STM32f is done by using ARDUINO IDE, PROTEUS Software. Buzzer, Fence ,LCD ,LED are also interfaced to the STM32f controller.

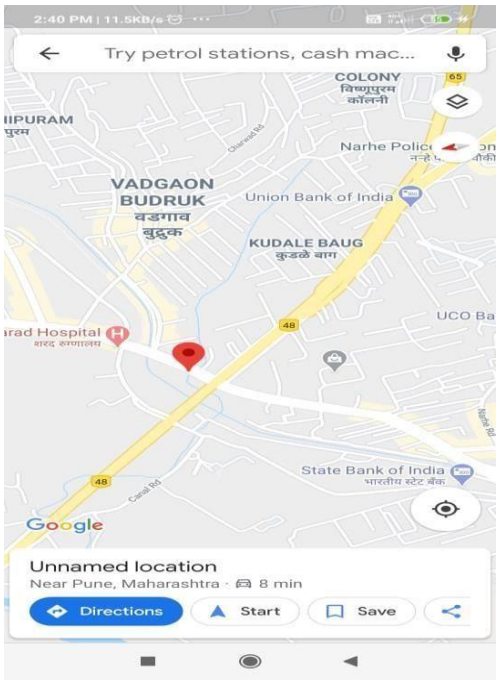


**Fig 5.2 GPS location of Proposed Model**

Figure 5.2 shows the location. We will receive SMS using GSM which will show a link with latitude and longitude. By clicking on the link we will be redirected to the g-map and this will show the exact location of the victim or the person in need.

## VI. Conclusion

The proposed design will deal with critical issues faced by women , old people and will help to solve them with technologically sound equipment and ideas. The merit of this work is it not only provides safety and it also provides security by means of self-defense mechanism. The crime against the women can be now brought to an end with the help of real system implementation of the proposed model. The overall system is first of its kind that provides a complete kit solution to the existing women safety problem, with the complete system the women can now travel freely without any hesitations of getting harmed by the societal issues. The further research can be made to make the prototype version of our system into a consumer portable product.

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