

Smart Intelligent Security for Women

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Abstract—Today in the current global scenario, the prime question in every girl's mind, considering the ever rising increase of issues on women harassment in recent past is mostly about her safety and security. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. This paper suggests a new perspective to use technology for women safety. "848 Indian Women Are Harassed, Raped, Killed Every Day!!" That's a way beyond HUGE number! We propose an idea which changes the way everyone thinks about women safety. A day when 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 propose to have a device which is the integration of multiple devices, hardware comprises of a wearable "Smart band" which continuously communicates with Smart phone that has access to the internet. The application is programmed and loaded with all the required data which includes Human behavior and reactions to different situations like anger, fear and anxiety. This generates a signal which is transmitted to the smart phone. The software or application has access to location of women and Messaging services which is pre-programmed in such a way that whenever it receives emergency signal, it can send help request along with the location co-ordinates 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 Public in the near radius who can reach the victim with great accuracy.

Keywords; GSM, Smart phone, Temperature sensor, Pulse rate sensor, Buzzer.

I. INTRODUCTION

Women safety is a very big concern in a country like INDIA where women are playing an outstanding role in each and every field. This paper focuses on a security system that is designed merely to serve the purpose of providing security to women.

An advanced system can be build that can detect the location and health condition of person that will enable us to take action according based on electronic gadgets like body temperature sensor, GSM, pulse rate sensor.

The smart band integrated with smart phone has an added advantage so as to reduce the cost of the device and also reduce size. Women safety is a very big concern in a

country like INDIA where women are playing an outstanding role in each and every field. This paper focuses on a security system that is designed merely to serve the purpose of providing security to women.

II. METHODOLOGY

The proposed system is to ensure the security of the women in the society by providing automatic sensing of threats and send the "HELP & POSITION " to the relatives and the police station using internet of things. Proposed model is wearable model. It consists of the Arduino Board, GSM modules, pulse rate sensor, temperature sensor, LCD display, the device will get activated automatically.

A. Arduino Uno Board

The Arduino Uno is a microcontroller board based on the ATmega328 (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. It's an open-source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board.

B. Temperature sensor

It used to measure the amount of heat energy produced by an object or human body, it produces an output in analogue format, a formula is used to convert the analogue signal into the temperature of human body.

C. GSM module

GSM (Global system for mobile communication) is a cellular technology which is used for voice and data transmission and it is possible to transmit SMS.

D. Pulse Rate Sensor

Heart beat sensor gives digital output of heart beat. when heart detector is working the LED flashes for every heart

beat. This digital output will be connected to microcontroller directly to calculate the beats per minute rate.

E. LCD (Liquid crystal display)

LCD screen is an electronic display module and find a wide range of application. A 16x2 LCD means it can there are 2 such lines.

F. Buzzer

It is a sensor, which gets input from the user and produces output in digital format. Usually a buzzer is a form of a switch, give output zero when it is not pressed and give one as output when pressed.

G. Power supply

This unit was developed around, built and incorporated in the arduino uno board. The power supply source for the system would be mains AC. The circuit would use a 12V DC and consists of the rectifier diode, smoothening capacitor and the voltage regulator.

III.IMPLEMENTATION

This project clearly uses two main modules of GSM and a microcontroller. The User when sends the messages through his phones those reaches the GSM, through the AT commands all those messages reaches the microcontroller. The microcontroller takes the data in terms of bits through the Max232.Those information will be transmitted to the LCD display.

ALGORITHM:

- 1.Apply power supply in arduino uno board.
- 2.Initialize the sensors with 9600 baud rate.
- 3.measure the amount of heat energy and heart beatproduced by an object or human body using sensors.
- 4.The heart beat is high,to send the messages for family members and near police station using GSM module.
- 5.Finally display the data on the LCD display.

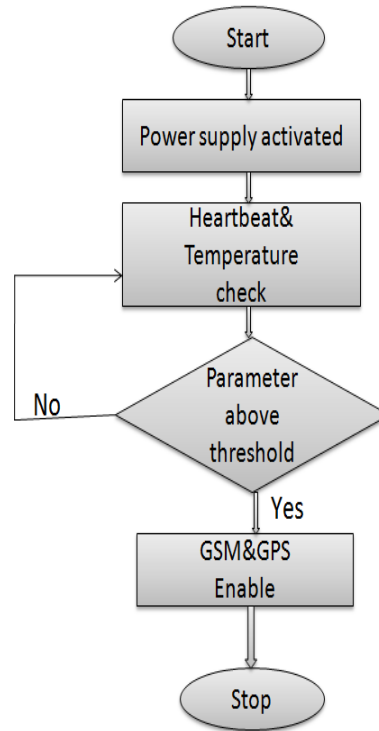


Figure 2: Flow chart of Women safety device

IV. RESULT

The proposed model of women security system as show in figure below

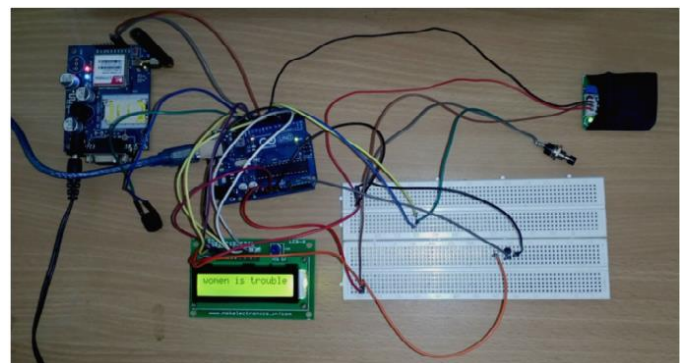


Figure 2: Proposed model of women security system

The working of the proposed model can be dealt in steps as following,

- Step 1:** When the woman is in distress situation, she can press the emergency key which activates the self defense module.
- Step 2:** This diagram shows measure the temperature and heart beat of particular person. This is done with the help of sensor.
- Step 3:** The current location of women by the smart phone and the determine the latitude and longitude of a receiver.
- Step 4:** Through GSM the emergency message is sent to the nearby police station, and also to relatives, friends by using the contact numbers which are stored in the GSM.

Step 5: Required data will be displayed on the LCD DISPLAY which is as shown above.

Emergency Switch Turned On. This diagram explains the emergency situation of the person whom we are tracking. When the switch is pressed emergency information is send to nearby police station.

This system can overcome the fear that scares every women in the country about her safety and security. The crime (molestations, robbery, sexual assault, rape, domestic violence) against the women can be now brought to an end with the help of real system implementation of propose model.

V.CONCULSION

This type of an idea being the first of its kind plays a crucial role towards ensuring Women Safety in the fastest way possible automatically. The proposed design will deal with critical issues faced by women in the recent past and will help solve them through technologically sound gadgets.

With further research and innovation, this project can be implemented in different areas of security and surveillance. The system can perform the real time monitoring of desired area and detect the violence with a good accuracy.

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