

Women's Smart Wrist Band

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Abstract - Nowadays, women safety is a major issue of our society. Number of victims are increased day by day. In this paper, we are proposing a model which will help to ensure the safety of women over the global. We have used different sensors like heartbeat sensor, temperature sensor for detecting heartbeat, temperature, and sudden change in movement of user. We have used GPS device which will help us to detect location of the device. GSM used in model to send alert message to parent's, relatives, and police station. We have proposed Iot (internet of things) based device which will help to continuously monitor values of different sensors and GPS used in device.

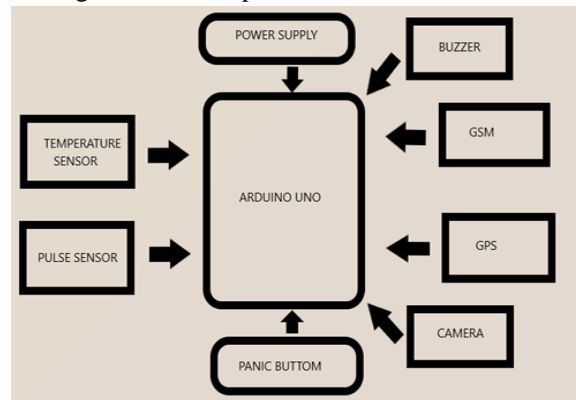
Index Terms - Arduino uno, IOT, Microcontroller, HELP, GSM, GPS, sensors.

I. INTRODUCTION

In today's world, women come across many situations that make them feel insecure and unsafe. Women safety matters a lot whether at home or any other place. We hear lots of headlines reporting cases of sexual harassment, molestation, sexual assault, trafficking, rapes, ill treatment of women in house, violence against women in our country etc. Women's Safety, hence, become a very important problem due to increasing numbers of crimes against women these days. Women face a lot of challenges every day and there is a need to construct a system to ensure women's safety. Although there are many other existing devices for ensuring security, the need of advance security device is increased day by day. In order to minimise such problems smart security system for women is implemented. This system describes about safe and secured electronic device for women that is designed to serve the security to women so that they never feel helpless while alone or in any other circumstances.

II. CIRCUIT DIAGRAM

Power supply: 5V power supply for Arduino uno, GSM and GPS The module also uses a 3.3V power supply for various sensors. The sensors will continuously send their values to the arduino. Arduino uno compares sensor reading to threshold value. arduino will generate a "HELP" message with the help of GSM. Global Positioning System. The connection to arduino uno will track the location of the device. Global Attach to arduino uno will send a message to the contact stored in card. The emergency button is used for the emergency alarm. When the emergency button is Pressing gsm will send an urgent "help" message without comparison to the threshold.



III. HARDWARE

GPS MODULE

NEO6M GPS module is used. The NEO-6M GPS module is a popular GPS receiver with a built-in ceramic antenna, which provides a powerful satellite search capability. This receiver has the ability to sense locations and track up to 22 satellites and identifies locations anywhere in the world. With the on-board signal indicator, we can monitor the network status of the module. It has a data backup battery so that the module can save the data when the main power is shut down accidentally.

GSM MODULE

It is a GSM/GPRS-compatible quad-band mobile phone with a working frequency of 850/900/1800/1900 MHz, which can be used for various applications such as accessing the Internet, making voice calls, sending and receiving text messages, and so on. The frequency band of the GSM modem can be configured through AT commands. The baud rate can be set from 1200-115200 to AT command. The GSM/GPRS modem has an internal TCP/IP protocol stack, allowing us to connect to the Internet via GPRS. This is an SMT module, which uses a very powerful single-chip processor design and integrates the AMR926EJS core, which is very popular in various industrial products.

ARDUINO UNO

Arduino uno is an open source microcontroller board primarily based on microchip atmega328p microcontroller and developed via arduinocc the board is outfitted with digital and analog input output to pin components which can be connected to various expansion boards shield and different circuits the board has 14 digital pins 6 with pwm output capability 6 analog io pins and can be programmed through the arduino ide integrated improvement environment by using a usb kind b cable it is powered with the aid of a usb cable or by using a 9-volt external battery even though it accepts voltages between 7 and 20 volts.

ARDUINO CAMERA

The ov7670 camera module is a compact, sensitive, low-voltage CMOS image sensor module, based on the ov7670 image sensor scbc bus control, which can accurately perform image acquisition and processing, allowing the sensor to output different frame sampling resolutions and 8-bit data. OV7670 is A low-cost DSP image sensor that can run at up to 30 fps and 640 x 480 vga and supports 03-megapixel resolution. The captured image can be pre-processed by the DSP before sending, and this pre-processing can be done through the scbc serial camera Configure the control bus.

BUZZER

This is a universal continuous piezoelectric buzzer alarm. Its operating voltage is between 3 and 12V. It has two mounting holes and can be easily installed on a flat surface.

PULSE SENSOR

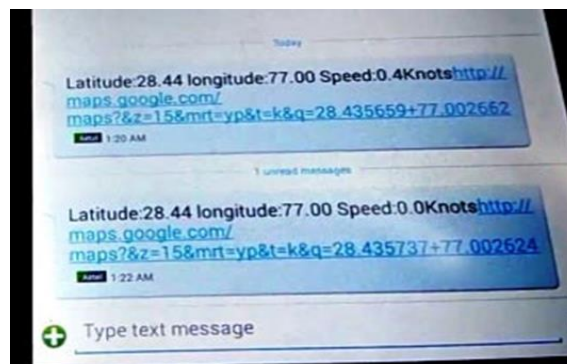
the pulse sensor is play heart charge sensor for arduino uno can be used via athletes manufacturers video games students etc

TEMPERATURE SENSER

the LM235or LM335 sequence temperature sensor has a linear output which gives two purposes the output is 100mv which is linearly proportional to the absolute temperature.

IV.WORKING

In the system implementation plan, various sensors used in the system are implemented and tested individually. The implemented system includes various sensors and components, Temperature sensor, Ir sensor, ov7670 camera module, buzzer, pulse rate, and temperature sensor lm35 These are implemented using ArduinoUNO. Thresholds are set on all sensors These values are captured by fluctuating sensors when the victim is in danger The system also includes a buzzer that sounds a buzzer when the threshold is exceeded One of the sensors is connected to GSM and GPS sensors When the threshold is exceeded, a message appears to the module registered mobile phone number indicating the victim's current location The system can send an SMS to the registered contact number using the GSM module. Also uses the GPS system to determine the victim's current location and Send to registered number and camera module is used to capture pictures when the temperature exceeds the threshold value.



V.CONCLUSION

This work aims to protect the safety of women. It is a portable device, so it can be easily carried anywhere. The device continuously monitors the pulse rate of the

user who uses it. If the pulse rate is higher than the threshold, the signal will be automatically sent to the registered device, and the app will send an alert message to the registered contact. In addition, an alarm message with an image of an intruder will be sent to the police station/help hotline. The user must press the emergency button to send out an alarm message. The device is affordable, so ordinary women can use it when traveling outdoors.

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VI.FUTURE SCOPE

In the future, additional functions such as cameras and voice recorders can be added to the hardware so that real-time user updates can be observed, and safety measures can be provided in the event of danger. And you can use the latest version of the hardware to improve performance.

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