

SMART WATCH FOR WOMEN SELF DEFENCE

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Abstract: Women everywhere the globe face and even subjected to unethical physical harassment. This project deals with a fast responding, cost protection system for an individual and particularly for girls in anguish can get help just with the press of a button on this smart gadget. This smart gadget has the power to assist women with technologies that are embedded into a compact device. It bears a button that may be utilized by women to tell nearby station and anxious person after they are in distress. This watch directly gets connected to the satellite through GPS when activated. Then the location is transferred through the WIFI, it also contains a shock mechanism to supply non-lethal electric shock in emergency situations to discourage the attacker.

Key Words: Arduino UNO, Emergency button, GPS, WIFI, Voice Recognition Kit, Shock Generator, Pulse Sensor, Buzzer

1. INTRODUCTION

In this current global scenario women face lots of physical violence (harassments, robbery, regulatory offense etc.), because lack of proper policing and ineffective laws etc. Now there's requirement for a few change. Smart watch for women self-defence is specially designed for girls safety. Its a button which can be employed by women to tell nearby police office and anxious person after they are at risk. By using GPS location is tracked and its transferred through WIFI. Through voice recognition or by

pressing emergency button, shock are going to be activated.

1.1 PROBLEM STATEMENT

The problem arises whenever there's any critical situation that can't be handled by herself i.e. when a lady is in peril they become very helpless that they'll not be in a position to work with their cell phone while there are many mobile application for girl's security and he or she might not be able to defend herself from the attacker.

1.2 OBJECTIVE

In this project, an effort is created through the usage of GPS technologies to detect and track the position of the Mankind especially women, children and any people who are in trouble.

2. LITERATURE SURVEY

In [1] This paper proposes a women security device called Suraksha, which may be activated through voice command which has been embedded into jewellery like locket or other carrier like belt.

In [2] This is often an android application. This paper proposes a recognizing app called as IPROB to produce safety disaster by just shaking the mobile above predefined threshold.

In [3] This presents Abhaya, and android application for the safety of women and this app can be activated by a single click whenever needarises.

In [4] In Smart Foot Device for Women Safety, there is a need to introduce a solution that can be triggered externally but in a discrete manner without the knowledge of the perpetrator.

In [5] Bluetooth Aided Safety Band for women, this paper aims to create variable band with provision of connecting with Smart phone viaBluetooth.

In [6] Proposed 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.

In [7] The proposed device is more like a safety system in case of a emergency. This device can be fitted in a jacket (similar to blazer for women). It is an easy to carry device with more features andfunctions.

3. METHODOLOGY

3.1 Block Diagram

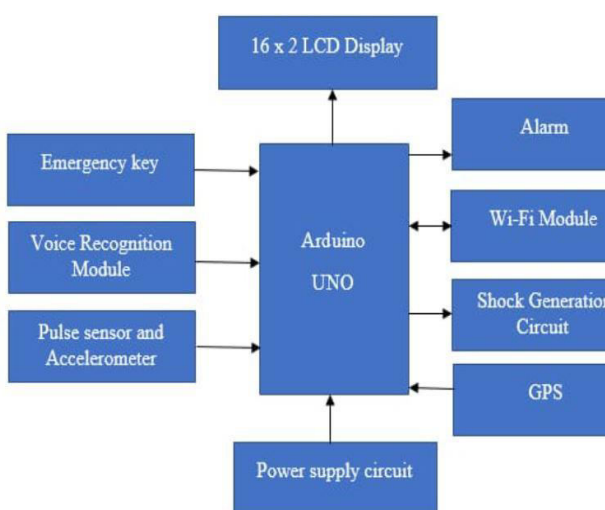


Fig 3.1 Block Diagram Of Safety Watch

a. Arduino UNO: Arduino is open source prototyping platform supported flexible, easy- to-use hardware and software. Arduino is small microcontroller board with a USB plug to attach to the pc and a variety of connection sockets which will be wired up to external electronics, like motors, sensors, laser diodes, loudspeakers, microphones,etc.

b. GPS: The Global Positioning Systems (GPS) is fully functional satellite navigation system. GPS has become indispensable for navigation round the world and a vital tool for map-making and synchronization of telecommunicationsnetworks.

c. Alarm: Piezo buzzer is an electronic device often used to create sound. Light weight, simple structure and low price make it operational in various applications like car/truck reversing indicator, computers, call bellsetc.

d. Pulse Rate Sensor: Pulse Sensor is a well-designed plug-and-play heart-rate sensor for Arduino. The sensor has two sides, on one side LED is placed together with an ambient light sensor and on the opposite side we’ve some circuitry.

e. Voice Recognition Circuit: The speech recognition system is totally assembled and simple to use programmable speech recognition technology. It has 8 bit data out which might be interfaced with any microcontroller for further development.

f. WIFIEsp 8266: ESP8266 offers a whole and self-contained Wi-Fi networking solution, allowing it to either host the appliance or to dump all Wi-Fi networking functions from another application processor.

3.2 WORKING

This proposed system consists of a Pulse Rate Sensor which can detect the heart beat by sensing our temperature. Then the emergency button is pressed to realize the eye of the people nearby and using the GPS the location is transferred to the concerned person and nearby station. This emergency button is employed during emergency situations which will directly activate the shock generator without giving voice or using pulse sensors. The Voice Recognition Kit will recognize the predefined voice which is able to activate the shock generator and also the location are going to be transferred to the concerned person and nearby policeoffice.

3.3 FLOW CHART

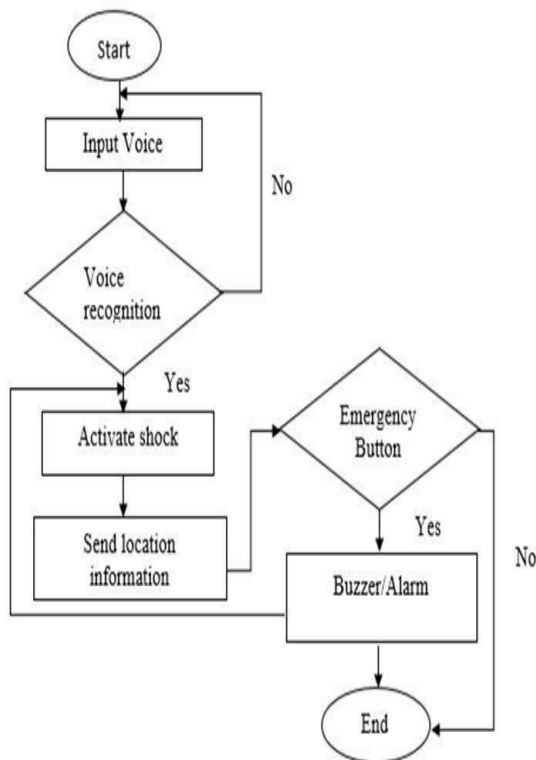


Fig 3.3: Flowchart of proposed model.

4.RESULTS AND CONCLUSION

This system very useful when the person doesn't have any device for communication. It's a tiny low portable system which can't be easily identified as a communication device. It can be easily fitted within a watch. It can track the person whether or not they're in an exceedingly less coverage area. So this system is often carried anywhere easily and used at any time without much user interaction and with best functionality.

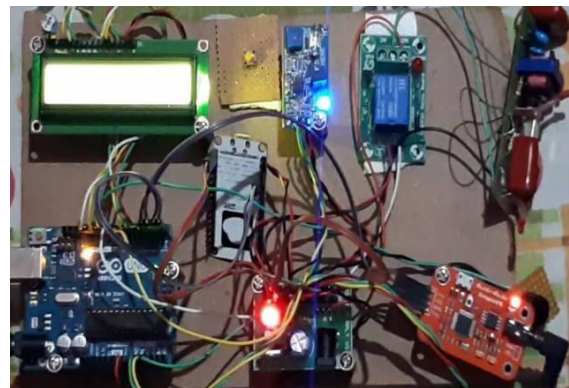


Fig 4.1: Prototype of safety watch

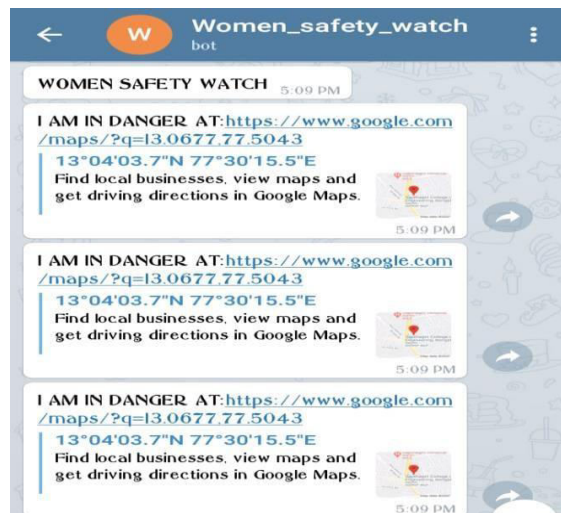


Fig 4.2: Location of the victim

5.FUTURE SCOPE

As the main aim within the world is to make sure women's security, so by this model we will achieve our aim, also slowly it would reach the rural areas and also the women can benefit themselves at a low price and women can leave their houses with none worries. This technique is more advanced by adding calling feature. Images can be clicked within the advanced system. For more efficiency raspberry pi can be used rather than Arduino.

6.REFERENCES

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