Women Safety Using Wearable Device

Shashank Tiwari

Pune,India

Saurabh Punjabi

Pune,India

Siddhant Shitole

Pune,India

Abstract—Day by day the women safety is becoming the 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 call on resources to help the one out of dangerous situations. The system consists of pulse sensor, which when activated ,sends values to the training dataset to be compared with per 10sec. If the comparison result is abnormal then a popup message is send to women.. The

women has to take required actions based on the situations. It will automatically make an call to our registered contact and also through GPS/GSM it will detect the nearby police station and make an ring there so it will be helpful for police to arrive soon at the spot by tracking the GPS , such a system will lead to safer and better environment.

Keywords— Sensors, GPS, Help, IOT.

1. INTRODUCTION:

In todays world both men and women are considered as equal,but they are only sequal.Womens are always having fear of getting harassed and killed.All such cases are increasing day by day therefore it is necessary to ensure womens safety. In this paper proposed model of smart wearable device we will provide a measure that can

provide the required safety to women so

that they can be independent.The proposed

model contains sensors which help in the respective cause. IoT (internet of things) is new and developing domain. By using IoT as technology , relatives and police can monitor and track position of a device. A device is wearable and so it is easy to carry.

2. MOTIVATION:

In today's world, women safety has become a major issue as they can't step out of their house at any given time about the temperature and pluse. Even in the 21stcentury where the technology is rapidly growing and new gadgets where developed but still women's and girls are facing problems but this is the application provide the more easy and important feature to the women safety detection using sensor via alert message

3. COMPARISON OF OTHER DEVICES AND APPLICATIONS :

Name	Applications	Disadvantages
VithU App	Alert text messages will be send to,contacts listed before.	Here inorder to make the device work we have to press the power button for atleast two times continuously.Technically this is not possible in all the situations.

| Name	Applications	Disadvantages
Nirbhaya	Here the user send an SMS alert with a single touch to the selected contacts.	This application has physical dependencies.
SOS-Stay Safe	On shaking the device or by clicking the power button it sends alert message with your name, Your location.	If user fail to shake or click button the application is of no use.

4. WORKING:

The whole process revolves around heartbeat sensor.As the heartbeat reaches above a targated heartbeat.The wearbale sends an notification (alert message)to the user if the response is positive from the user no action is taken.But if there is no response or a negative response from the user to the notification.It sends an alert message to the nearby police station.The cops can trace the location by GPS which is updated to them periodically. Then it also sends an alert message to the already saved contacts so they can get an update about the person wearing the band .
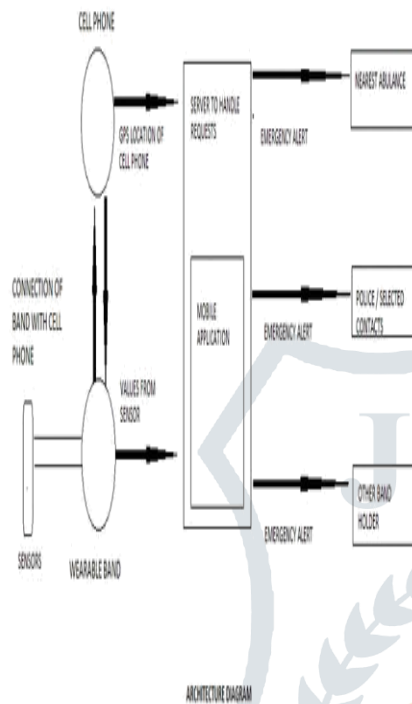
5. WEARABLE IOT DEVICE:

The IoT wearable device tasked with acquiring various data from the all the different modules connected. It comprises of ESP12-E NodeMCU Kit . It receives the data from its various physically connected modules, anatomizes this data and refines the data in a more user understandable format to the different available user interfaces . The user, therefore, can conveniently view the information on their cellphone. The physical characteristics of the wearable device are

proposed to be as a wrist watch which remains placed around the wrist of the women during times when the women is not being accompanied. For the moment the design is not made compact, since the main focus now has been to show that this concept of smart wearables would be highly impactful for the safety of women.It features 4MB of flash memory.. In order to maximize power consumption, the wearable device has been programmed to provide GPS information only upon request by the user.
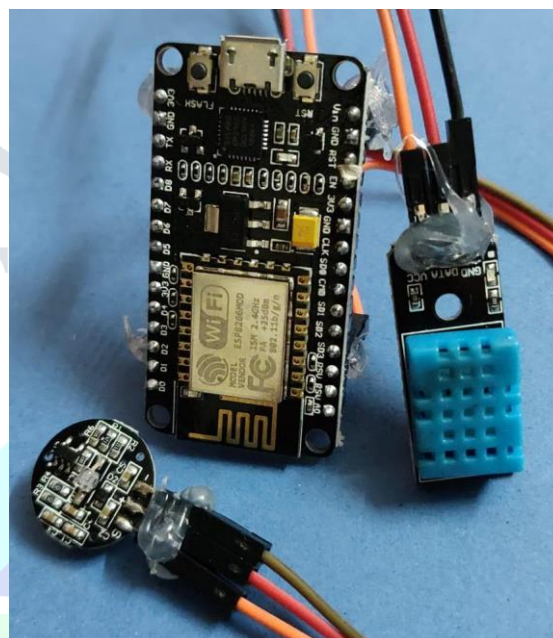
6. SYSTEM ARCHITURE :

Here the core element of the whole system is the smart wearable band which comprises of ESP12 which is wifi enabled.The ESP12 is provided connection with different sensors(Heart sensor,Temperature sensor).It is wifi enabled so in contact with mobile GPS too.The combined readings is sent to the server for analysis.Now based on the action taken by the band user using its respective application the necessary action is taken and the required help is provided by ours servers.The nearest ambulance is provided the band users location in distress.Alert messages are send to the selected contacts.A network of band users is also established so the nearest band user can provide help as soon as possible.

9. CONCLUSION :

The proposed design will deal with critical issues faced by women in the near past and will help to solve them with the help of sensor. This system can overcome the fear that scares every woman in the country about her health safety. We can measure the body temperature and pulse using Various temperature and pulse sensors.

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ARCHITECTURE DIAGRAM

7. OBJECTIVE :

Main purpose of the system is to provide security and safety. As being an independent
nation womens are not safe even today. There should be some effective measures for the security of the womens. This application uses pulse readings of that women and protect her. If she is in danger her relatives are notified.

8. ADVANTAGES :

[1]This application provide accurate result about pulse and temperature readings .

[2]This application is reliable and faster in responding.

[3]Immediate action can be taken as near by police station is involved.