SMART BAND FOR WOMEN

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Abstract - Today, women face critical difficulties in present world circumstances. We are able listen more of the news of women's badgering than of their accomplishments. The app is triggered by this and the user is alerted via vibration. In spite of the fact that smartphones have developed quickly, it isn't conceivable to have the phone all the time in your hand to press on it or make a request call so here we presented a unused method through smart watches. In case a woman or child wearing this watch is uncovered to a sexual or helpless assault, the sensor will identify a person's pulse rate. At that minute, the rate of the pulse will be high due to the discharge of epinephrine hormone from the hpa pivot. The app is triggered by this and the user is alerted via vibration. The wearable device is operated on a voice order of the operator. It does not only trigger an alarm to the ears of local residents, but it will also immediately transmit the alert to a registered contact. It can distinguish the area of the closest police station and send the message by GPS / GSM so that it would be valuable for police to reach at the spot early by tracking the GPS, it'll indeed collect the encompassing photographs and spare them within the cloud. Such a wearable gadget will bring a more secure and way better society.

Keywords - Smart Watch, Heartbeat sensors, Vibration motor, Camera, Microphone, GSM, GPS, Arduino, Raspberry pi.

I. INTRODUCTION

Women's security in India may be a tremendous issue now-a-day. We cannot say that women are secure in India by witnessing violations against women in specific within the national capital over the last few years. Women are generally afraid to go outside alone. It is the country's very sad fact that its woman people are all the time living in danger. For any Indian resident, the personal protection of women has been the subject of importance. Despite the formation by the Indian government of various effective rules and regulations for handling and controlling the violations against women, the number of violations against women is expanding day by day. Within the last few years, women's status within the nation has been more hostile and dreadful. It has decreased women's confidence level in their own country for safety. We should not blame the government for the fact that women safety is not only a government responsibility; it is the duty of each Indian citizen.

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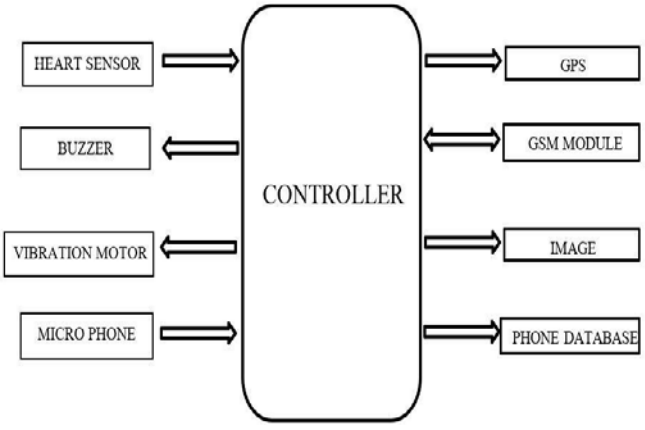
II. METHODOLOGY



Review Stage

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A. The smart band consists of a heart rate sensor and voice controller that is used to turn ON/OFF the device. The Vibration is provided to notify the user that the device is activated. The device should be capable of recognizing the voice of its user only, incase no voice is found, or the voice of the user is not matched these operations do not take place. A message will be sent to the saved contacts and closest Police station. The message comprises latitude, longitude, and link. The link will be directed to the google map. There is a buzzer to alert the people around for help. A captured image is saved in the drive.

The pulse sensor will sense the pulse of the user. Incase if the pulse crossover the threshold value at that point vibration is delivered within the band. The band will be activated when the person wearing the band says the word "Help" and the band will be directly deactivated when the person says "Stop".

After 30 seconds of the band activation, the location of the person and a message saying "Help me" will be sent to the contacts saved in the database and also to the nearby police stations. A buzzer will switch on, which will beep for 1 minute and will reach up to a range of 100 meters. For every 2 seconds, an image of the scene will be captured and saved in the drive. The person wearing the band can say "Stop" to stop the buzzer and image capturing if it is a false alarm.

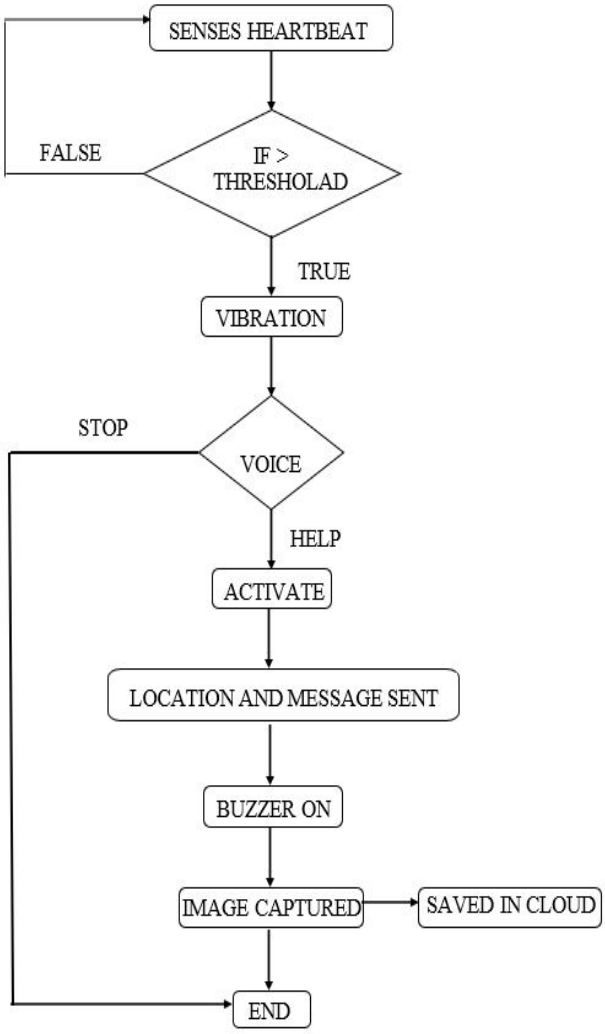

FIG 2: FLOW CHART

III. RESULT AND DISCUSSION

We have developed a prototype featuring a heart rate sensor. It senses the heart rate, when it reaches the threshold value, the vibration module starts vibrating (Fig 3) and we have also used the GSM module to detect the location and send the message.

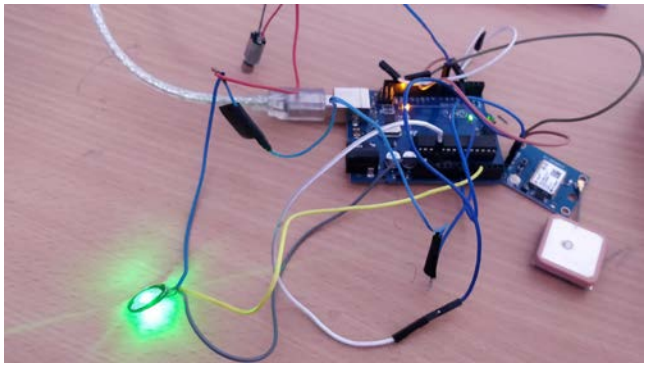

FIG 3: VIBRATION MOTOR

Here will be showing how the band starts operating. The band starts its operation when the person says “HELP”. Send a message to the number you entered in the program. The message will reflect the longitude and latitude of the sender's location are shown in Fig 4. After the message is sent, an image of the attacker or the surrounding is screened as shown in Fig 5, and images are saved in the cloud which can be accessed when needed.

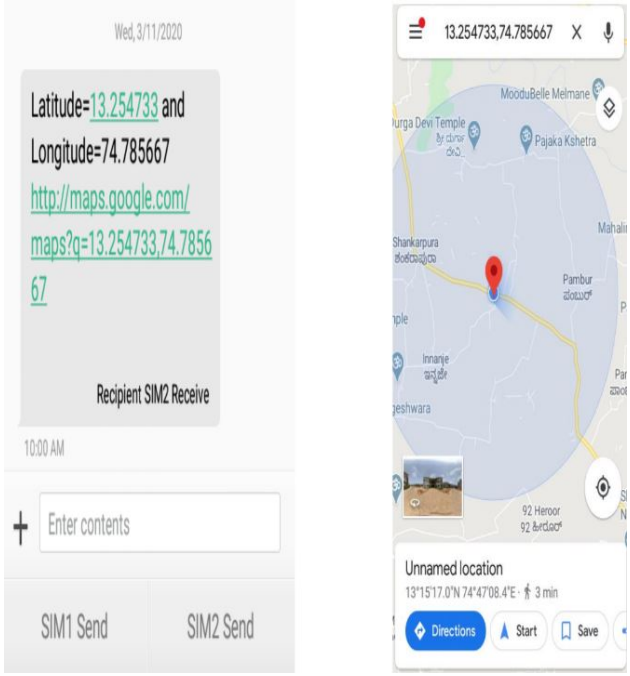

FIG 3: MESSAGE SENT AND LOCATION TRACED

FIG 4: IMAGE CAPTURED

This band doesn’t operate if anyone other than the owner of the band says “HELP”. We should stop the band by saying stop.

IV. CONCLUSION

Main goal of this paper is to ensure that all women in our society are feeling safe and comfortable. Our initiative will play a significant part, for instance by providing women with a secure atmosphere in all circumstances (physically assaulted, abused, stolen, stalked). We will tackle the topic by combining software and a device in real-time. This prototype is used as a tiny wearable tool such as a watch, pendant, etc. with more work and invention.

V. FUTURE WORK

Functional smart watches are a secure choice. Example of the IOT, since they are portion of real objects or 'stuff' inserted in gadgets, program, sensors, and organizing to permit objects to exchange data with a producer, administrator, and/or other associated gadgets, without requiring human intercession. This plan would also be useful for women's welfare in the future. Because of the recent occurrences of child crimes like lost babies, rape, abduction, etc., the welfare of school children is a major concern for parents as well as school administration. This module tracks the safety of children when they travel on school buses.

VI. REFERENCE

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