

# Smart Technology For Women Safety Using Android App And Wearable Device

Harshali Jadhav<sup>1</sup>, Sayali Joshi<sup>2</sup>, Rima Katkar<sup>3</sup>

Department of Information Technology,  
MET's Bhujbal Knowledge City IOE, Nashik

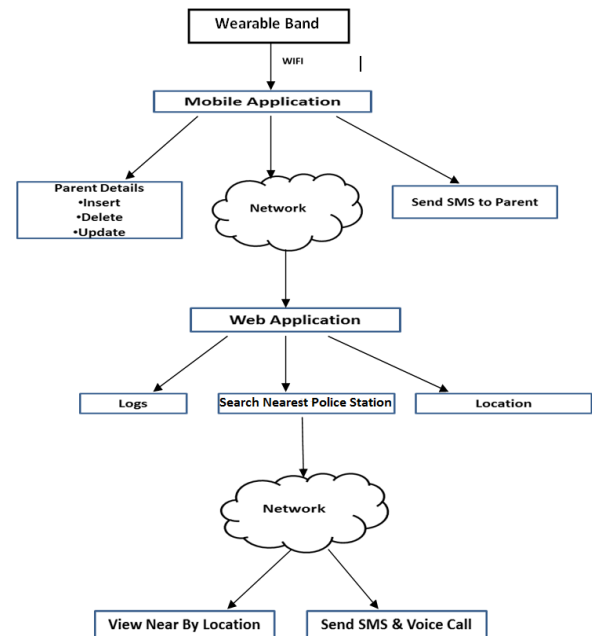
**Abstract**— According to the reports of WHO, NCRB-social-government organization 35% Women all over the world are facing a lot of unethical physical harassment in public places such as railway-bus stands, foot paths etc. This device for the women security in public places which aims to provide the 100 percent safe environment. This system can be implemented as an android app application and using Arduino based board. This system provides all required functionality and there is no need to buy and install different apps that possess different functionality. Hence the cost gets minimized as well as the memory requirement by the system is less compared to having many apps.

**Keywords**—Wearable band, mobile, WIFI connectivity.

## I. INTRODUCTION

Women and young women experience and fear distinctive sorts of sexual viciousness straightforwardly spaces, from scurrilous conduct to assault including ambush and femicide. It happens on roads, open transport and stops, in and around schools and workplaces, out in the open sanitation workplaces and water and sustenance assignment areas, or in their own specific neighborhoods. In India, reliably more than 30 women were executed and many are persevering dreary mental and physical trauma[6]. The terms wearable development, wearable devices, and wearables all insinuate electronic advances or PCs that are solidified into things of clothing and decorations which can peacefully be worn on the body. These wearable devices can play out some of an unclear figuring errands from PDAs and PCs, once in a while, wearable advancement can defeat these hand-held devices through and through. Wearable development tends to be more cutting edge than hand-held advancement accessible today since it can give substantial and checking highlights not ordinarily found in compact and tablet devices, for instance, biofeedback and taking after of physiological

function. Examples of wearable contraptions join watches, glasses, contact central focuses, e-materials and sharp surfaces, headbands, beanies and tops, pearls, for instance, rings, arm trimmings, and listening gadget like devices that are planned to look like studs. The application mean to make in military application to recognize range of contenders and their prosperity information. In occurrence of consistently routine occupations any proprietors can use such device to screen their agents. e.g pizza hut, transportation organizations etc. For childrens security.



**Fig. 1: System Architecture**

Fig. 1 depicts the system architecture of our proposed system. The wearable band is connected to our developed mobile application through wifi. In case when the button is pressed, the parents as well as nearby police will be receiving notification. Along with SMS, a voice call will also be sent as an alert to the police.

## II. HISTORY & BACKGROUND

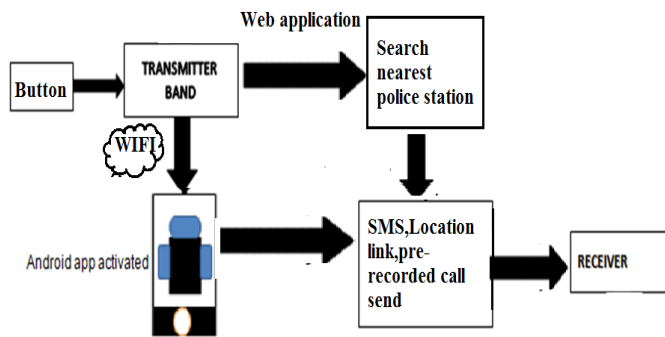
The paper [1] proposes a voice catchphrase seeing application to see the customer and start the application helpfulness

despite when the versatile keypad blasted. The GPS module tracks the longitude and extension to take after a right range of a customer and sends the pre-secured emergency message including territory to the enlisted contact numbers. The Audio Recording module starts the recording of the examination for five minutes and set away as confirmations. The message goes in line if mastermind issue and send when framework gets open. A notice is made for productive pass on message. Furthermore customer can pick contact through voice based contact summary and make a call. Observe: The talked watchword changed over into a substance to differentiate and the enrolled catchphrase. The paper [2] proposes an emergency response condition seeing application called as IPROB to give women prosperity even in the situation like dread monger ambushes or normal fiasco, by essentially shaking the flexible over as far as possible regard subsequently authorize the system. It starts discovering the incorporating voice to test and avow the risky IPROB situation where it raised the notice and customer disregard to respond in predefine time then the message alert sends to the enlist contacts. If the adaptable profile at the authority is in calm mode then change over it into the General profile to give the voice cautioning as "YOUR CHILD IS IN TROUBLE PLZ HELP...PLZ HELP ... " reliably like a ring tone, until they stop it. In case an enlist contact certifies a PROB then fitting emergency organizations lik crisis vehicle, fire separation are advised. If an enroll contact responds with an equipped for being heard cautioning, then it subsequently interfaces and engages the speakerphone at the loss side. A fused tri-essential accelerometer used to survey the exceptional advancements that a phone experiences as cutoff. The paper [3] proposes a SCIWARS application (Spy Camera Identification and Women Attack Rescue System) which comprise of two modules. A first module go about as an insightful alarms framework which identifies the infrared beams originating from consistently vision shrouded cameras set in evolving rooms-lodgings room and so forth and furthermore educated the client about risky place through message. Presently it's the client obligation whether to enroll a dissension or not by sending the warning with the area to lawful specialists, for example, Police. The second module will get actuated by squeezing any key constantly which will

give the assistance to the casualty from physic assault in dangerous circumstance. It sends the crisis message containing area to enlist contacts. It likewise records the voice and catches the pictures of the encompassing for 45 seconds. This data additionally put away in mystery area of portable for future confirmations. This application additionally ready to changes over the collector mobileprofile from quiet to general mode, and furthermore underpins the auto-call accepting framework at casualty side. The paper [4] proposes an android application to give security at two distinct circumstances as takes after. The First module give security to Women at Emergency Situations propose a Save Our Souls (SOS) application to gives the security on a solitary snap of SOS catch for the ladies going around evening time or alone. No compelling reason to open the screen, rather by simply squeezing the power catch it straightforwardly triggers the application to keep running at the foundation, to send the crisis message incorporating the area as scope and longitude to the enrolled contacts. The second module proposes an android based home security framework that gives security of house assets and Senior Citizen in the client nonattendance. Since the security of senior national is dependably a worry with expanding number of burglary episodes. This application educates the client around an endeavor of interruption action at home through a message and an input SMS triggers a caution in the house. The base prerequisite is the android portable, an equipment circuit inserted with a switch and GSM modem that are associated with the entryway. At the point when a gatecrasher tries to open the entryway, the switch triggers a hinder for the microcontroller to enact the GSM modem to send cautioning SMS to the store enlisted number in the modem. At the collectors end the application fly up the menu regularly for client consideration. On the off chance that the client neglects to recognize in the characterized time interim, then the programmed positive affirmation message get send to the remote GSM modem which thus interfere with the microcontroller for a caution.

### III.PROBLEM DEFINITION

Inorder to provide help to people especially women, in emergency situations, an emergency wearable device has been proposed.



**Fig. 2: Working of the system**

The button is the initial point and when it is pressed, the alert is sent to nearby police station by tracking location as well as to parents via voice call and SMS.

### Key Press Module

Key squeezed modules can be conveyed to raise crisis cautions. These frenzy catches/keys will interface with brilliant gadgets over Bluetooth and when activated, it will send a notice to a keen gadget, which will trigger an alarm to the control room or crisis contacts over cell organize distributing current GPS area of where basic circumstance happen. A key squeezed module is an electronic gadget intended to help with alarming someone in crisis circumstances where a risk to people or property exists. Any activity can be actuates the framework, just by squeezing key which sends the message including the client area to the enlisted contacts. At the recipient, just by tapping on the area interface gave in the message it can demonstrate the area.

### Android Application

It deals with all collaborations with the client. Registry, area upgrading and pre-recorded call are altogether controlled and started utilizing the application.

### Web Application

Server deals with all the enrolled client information in its database and computes police headquarters inside a specific scope of the casualty.

### GPS Tracker/Location Based Services

Worldwide situating framework (GPS) can decide the scope and longitude of a collector on Earth by figuring the time distinction for signs from various satellites to come to the receiver[7]. Area based administrations (lbs) utilize continuous geo-information from a cell phone or cell phone to give data, diversion or security. Area based administrations utilize a cell phone's gps innovation to track a man's area, if

that individual has picked into permit the administration. After a cell phone client optin, the administration can distinguish his or her area down to a road address without the requirement for manual information section.

### SMS Sending

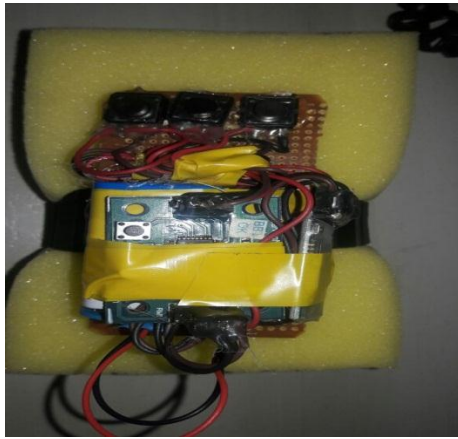
In the event of SMS based ready instrument, the caution ought to be sent straightforwardly to SMS recipient stage and that ought to trigger the alarm to control room and adjacent police headquarters and crisis contact enlisted through interface. Versatile notices and SMS ought to be utilized as method of correspondence by the server applications to speak with the portable platform. There ought to be few preconfigured choices for the client to report the occurrence area. Aside from advising the police headquarters, the portable stage ought to likewise illuminate precious ones of the client. On the off chance that relatives have a similar stage on their versatile, they ought to have the capacity to track the client what's more, check, where the help has come to. The versatile stage application ought to likewise give an I am Unsafe or I am in a bad position, please help as content in type of SMS, for clients to educate precious. This information can be utilized with the end goal of examination and to expand the watching of hazardous regions.

### Database Module

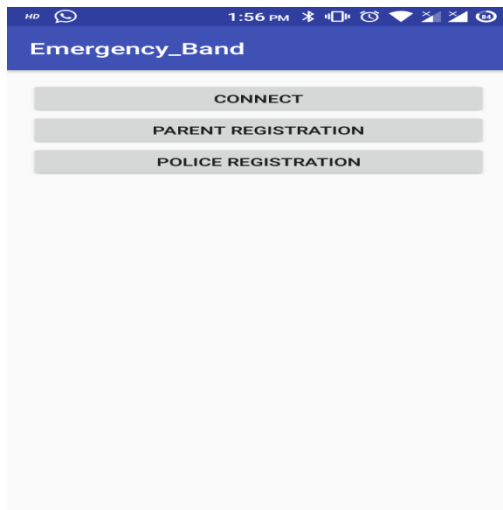
The client needs to enlist the crisis contact numbers with the framework which are put away in Register Contact Database. A voice catchphrase should be enroll with the framework. It additionally store the notice created by different modules as a report of confirmations. It utilized SQLyog database[5].

## IV. RESULT AND ANALYSIS

An emergency band would be worn by the person. We will be developing a mobile application which will help to send alerts in mobile of parents who are in emergency situations. The web application which will be developed is used to categorize the different users like parent and police. Parents can login to the system and view alerts by the relatives. Similarly, Police can login to the system and also, that particular location can be viewed on the map also and view daily alerts. Emergency message can be viewed by the police and appropriate action can be taken. Fig. 3 shows the emergency band kit which will be worn by the user.



**Fig. 3: Emergency Band Kit**



**Fig 4: Main Page**

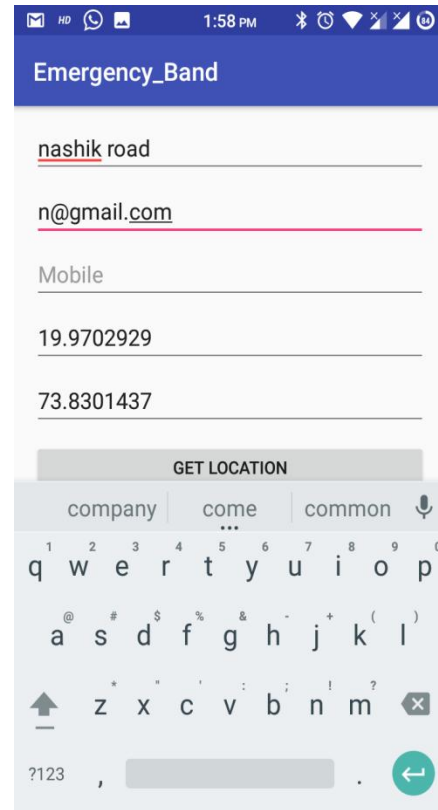
Fig. 4 shows the main screen of the app. Fig 5 shows the status after connecting with the app

When the user clicks on “Connect” button, then connection is established as shown in Fig. 5.



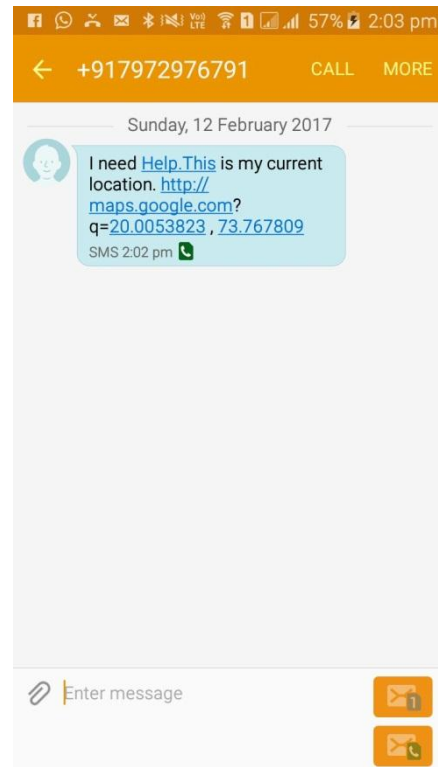
**Fig 5: Screen after connectivity**

When the button is pressed, a registration form opens as shown in Fig. 6. Here the user needs to fill the details like location, mail id, mobile number and will get the longitude and latitude of the current location.



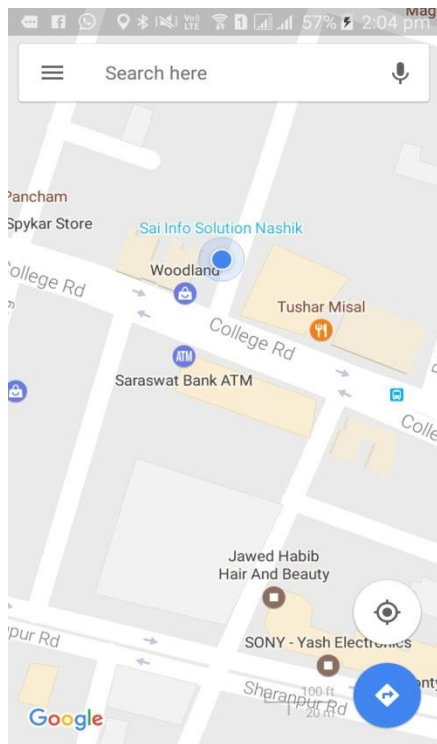
**Fig 6: Registration form**

The particular parent whose phone number is registered will receive an SMS displaying the location from where the emergency need has come. The screenshot is showed in Fig 7. In this figure, a sample message is displayed.



**Fig 7: Screenshot of SMS received**

When the user clicks on “Get Location” button, then the location is shown on the screen as shown in Fig. 8



**Fig 8: Screenshot of location**

#### V.FUTURE ENHANCEMENT

As the school children safety are major concerns for parents as well as school management due to the recent incidents of child crimes like children missing, abuse etc. This module monitors the child safety when they are travelling in school buses.

#### VI. CONCLUSION

It can be concluded that the system helps to supports the gender equality by providing safe environment to women in the society, and allows them to work till late nights. Anyone before doing any crime against the women will be deterred and it help reducing the crime rate against the women. It can be concluded by saying such a system can revolutionize the present scenario of women safety. It will make the women safe and secure in our public places..

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