# Alert System for Immediate Emergency Services

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**Abstract:** Any normal human being in distress or in emergency will try to contact necessary emergency and rescue services for help. Thus, mobile applications are developed due to the fact that it can help people who are in emergency cases. There is a need for mobile application to help people who are in emergency. When guardian presses the photo option, camera will be automatically enabled in the victim phone. This paper proposes an application which will work like an emergency pocket assistant to help people during the urgent situation. The idea for this application is easy and effective. The basic concept of this mobile application is, when the user fall into the emergency situation, all they have to do is shake the smart phone above the threshold value vigorously then immediately a message alert is sent to the parent / nearest one.

**Keywords:** Android application, GPS, Google Maps, Threshold, Emergency Notification System

## I. INTRODUCTION

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. It allows developers to write code in a Java-like language that utilizes Google-developed Java libraries. Alert System requires the data from the accelerometer is evaluated with several threshold values and position data to determine a problem. The threshold is adaptive based on user provided parameters such as: height, weight, and level of activity. If a problem is identified a notification is raised requiring the user's response. If the user does not respond, the system alerts pre-specified social contacts with an informational message via SMS. If a contact responds the system commits an audible notification, automatically connects, and enables the speakerphone. If a social contact confirms a problem, an emergency service is alerted. When guardian presses the photo option, camera will be automatically enabled in the victim phone. Our system provides a cost effective solution to problem detection using a simple graphical interface. We developed application for the safety of women, when ever somebody is in trouble they don't have to sit and find contacts or find ways to send SMS, or message the near ones. They might not have so much time, all they have to do is to shake the smart phone above the threshold value vigorously immediately a message alert is sent to parents.

**Problem Statement:** In emergency cases, any normal human would try to contact rescuers needed for help or he would prefer his contacts known about the situation. If the person is in shock, they cannot communicate effectively to explain their condition and position. In order to avoid this situation, this application enables the person to shake their mobile phones with respect to threshold values, and then automatically sms will be sent to parents.

**Proposed System:** This paper proposes emergency notification facility scheme, which make use of victim's mobile numbers, which provide notification message to victim parents and automatically generate ringtone if he is under critical condition. To detect speed of vehicle, speed specific value is set as threshold. In case speed exceeds the threshold value, notification is sent to parents.

## II. LITERATURE SURVEY

In [1], the authors have worked on speedometers for both two and four wheelers which can provide the user with speed of vehicle using GPS technology but later they found out that speedometer is not precise compared to GPS because it depends on wheel size.

In [2], the authors have described Abhaya, an android application for the safety of all women's which helps in live tracking of location of victim through GPS along with registered contacts. Sometimes it fails because it does not identify the exact location when root device changes its position.

In [3], the authors have proposed a new model for women security in public places which provides 100% safe environment. This app can be activated by a single click when user feels he/she is in danger and features are registered contacts and GPS location is saved in database.

In [4], the authors have described the software tools and techniques like Google Cloud Messaging, API, Bluetooth and SMS gateway. It based on Bluetooth Technology to activate SOS function without unlocking the mobile devices and notification will be sent to nearby users to increase chances of rescuing the sender faster.

In [5], the authors presents a framework for alert system in alerting incoming sharp corner and updating emergency places via GPS.They had developed GPS application which provides "buzz" sound as alertness to tell drivers about dangerous corners. For every 2 sec system will keep track of driver position.

In [6], the authors built android application for accident detection and reporting emergency. There are three main methods like reviewing related works to find some technologies, investigating requirements from general users, designing communication frameworks to develop the client and server side for exchanging information.

In [7], the authors have work on developing an automatic fall detection technique using Smartphone and fall is detected based on acceleration patterns generated during activities. This proposed technique consists of two techniques: fall detection and long lie detection. They found some drawbacks that cannot be solved by these algorithms.

## III.SYSTEM ARCHITECTURE

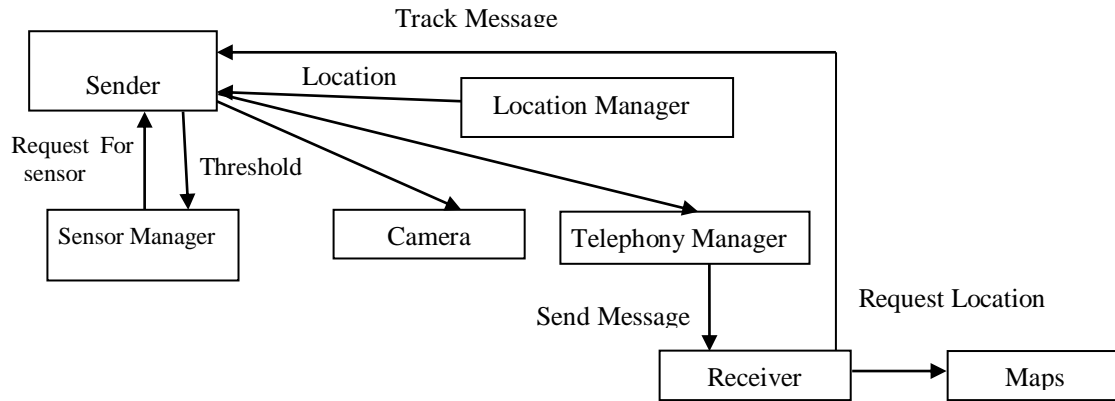The system architecture is as shown in Fig.1



Fig.1  Architecture Diagram

The architecture Diagram depicts overall picture of process that has been take place. Sender is responsible for tracking messages, setting the threshold values and setting camera image pixel values .Sensor Manger is responsible for Request sensor to vibrate when some person is in danger. Location managers responsible for accessing victim's location in the form of longitude and latitudes using GPS. Telephony manager is used when some person is in danger, it will automatically enable speakerphone and play the ringtone in Parents mobile. Receiver is responsible for request location to Google maps. If it get location guardian will view his/her location. The application has been developed for safety of girls. Whenever somebody is in trouble they don't have time to sit and find contacts or find ways to send SMS, or message the near ones. They might not have so much time all that they have to do is shake the smart phone above the threshold value vigorously. Then immediately a message alert is sent to parents. When a message called Alert is received it automatically changes its profile to general, and gives a voice notification "THE PERSON IS IN PROBLEM PLEASE HELP… PLEASE HELP…. REPEATEDLY AS A RING TONE" until they listen and stop it. If they want to find where their ward is all that they have to send is Loc as an Sms to their smart phone, it will respond with the current location of their ward.  If parents want to track their ward, they have to send Track message as a Sms to their ward's Smartphone, it will respond with the location every 5 minute once, which is stored and gets connected with the Google Maps using GPRS and plot the Route in live.
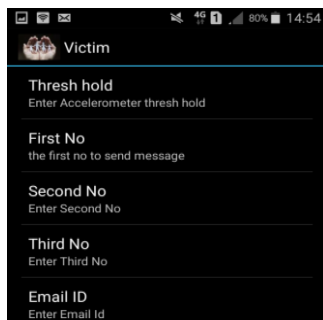
## IV.RESULT SNAPSHOTS



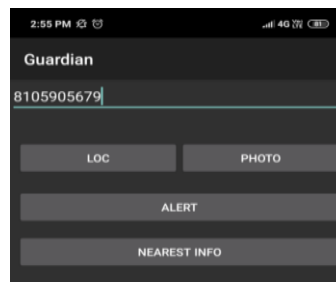Fig.2 Snapshot of Welcome Page



Fig.3 Snapshot of guardian app Front page

Fig.2 depicts the User who wishes to search for the files which should be registered users. They should know the mobile numbers and their respective Email ID. Fig.3 depicts Guardian should enter victim's phone number in order to capture his/her location, photo, nearest information and send alert to special officers.
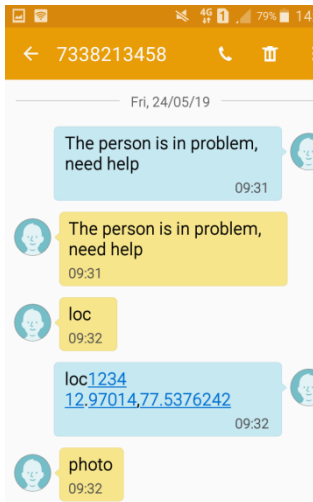


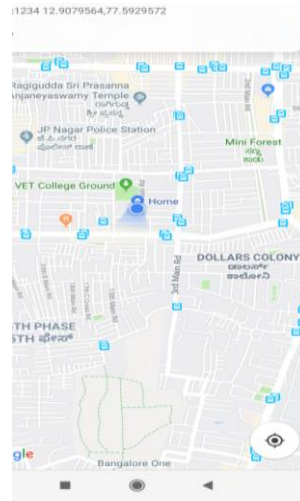Fig.4 Notification received by parent



Fig.5 Snapshot of Live Location Tracking

Fig.4depicts if parent shakes his phone with respect to threshold then automatically speaker will be enabled and guardian will hear ringtone. The Guardian will get to know about victim's location and photo by pressing loc and photo options. Fig.5 depicts Live location  is fetched by using GPS and Guardian can view the location of victim and he can reach victim location by the help of transportation facilities.
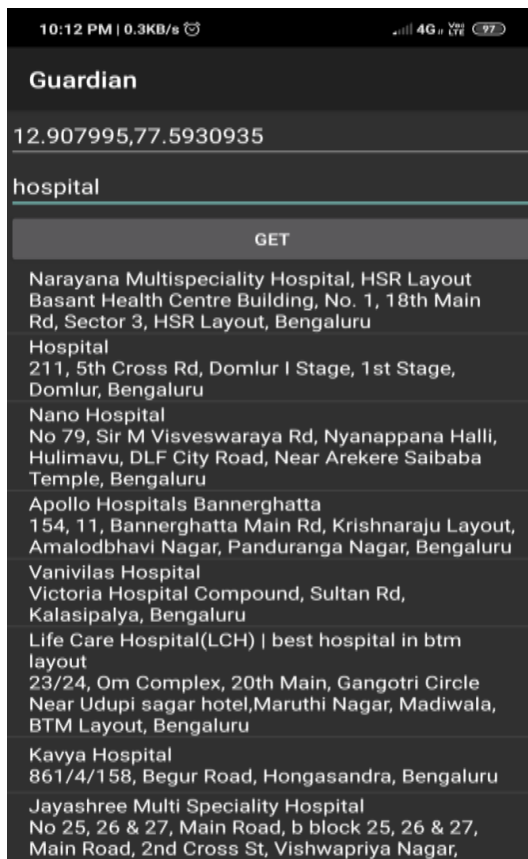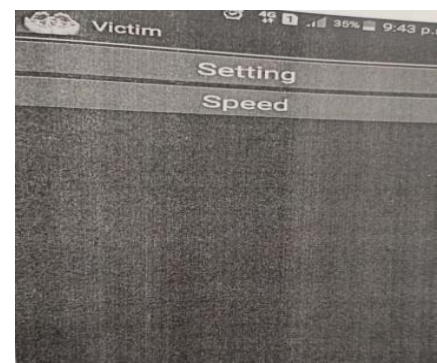


Fig.6 List of Hospitals



Fig.7 GUI

Fig.6 depicts If Guardian needs to know which are the nearest hospital and police station that are near to victim place then he click on Nearest Info with the help of GPS then it lists all the nearest hospitals as well as police station. Fig.7 depicts GUI of admin.
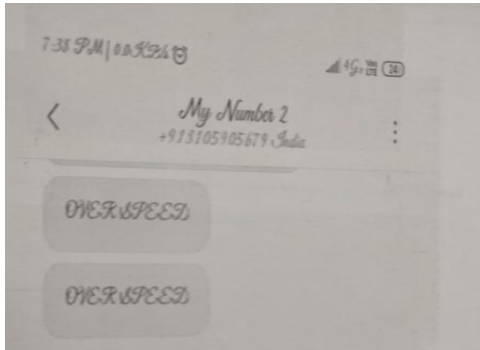


Fig.8. Over speed Notification



Fig.9 Speed detector

Fig.8 and Fig.9 depicts There are two options provided by administrator are setting and speed. After pressing speed option it wait for GPS to get speed. When it acquires location through GPS then it will start showing speed. Threshold value and 1m/sec speed will be set by users then we apply force until it crosses 1m/sec. if it cross speed notification will be sent to parents.

## V.    CONCLUSION

Mobile Applications will work like an Emergency Assistant to help the user to look for help during the stressful situation. This android application will work when the user shakes his/her phone vigoursly with respect to threshold values and provide a realizable, cost effective solution to problem detection using simple graphical user interface .The proposed system is able to provide security for women's and senior citizens. It can be concluded that the system helps in emergency cases can provide useful evidences. Since the system can capture the image of emergency situation which can act as the evidences.

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