

Emergency Assistance

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Abstract: The requirement of keeping ourselves as well as others has become more important than before, as the crime rate are getting increasing day by day. Keeping safe doesn't only mean that to get protection from only external threats such as crime but also from natural causes may be a health issues such as heart attack, panic attack etc. We can observe that the usage of mobile phones is at its peak. So, in order to solve the issue of emergencies we can use the technology such as mobile phones even though the mobile can't do anything we can use them to alert and provide the required information to the guardians, so that they can help to those who are in need. In order to achieve this, we are proposing an android application which makes it possible.

Keywords: Safety, Emergency, Assistance, Location, Help, Victim

I. INTRODUCTION

Emergency Assistance android app is an innovative application for men, women, senior citizens, students and for those who are in need of assistance. The app is very help full in order to find those who are in emergency. With the rapid growth of usage of the mobile phones and with a good internet connection the app provides a simple interface for those for the users in order to contact their guardians, to take assistance from the police or from doctors when faced with emergency. The Emergency Assistance app can provide the exact location of the victim so that the concerned people can help them.

Emergency Assistance app can be used in case of any crisis. The situations can be a theft, accident, death, medical emergencies, natural disasters like earthquake, tsunami, tornadoes, fire etc. The user can view the nearest hospital or police station with the use of Google Place API and it is displayed on a map with directions and with contact details.

Once the user presses the button a pre-configured SMS will be sent to the registered guardian's number along with his location. It is very helpful to track the victim. Also, a call will be placed to the first contact. And a loud alarm will be triggered that alerts the nearby people or passer-by to alert that the user needs help.

II. EXISTING SYSTEM

"An Android Application for Emergency Situations with Location Tracking", was proposed by Prof. Sandhya B. R in 2018. According to the paper the wrist watch is connected to the mobile and when the button in watch is pressed a message will be sent to guardians along with the user location. And a call is placed when there is a network issue. This is one of the disadvantages of the existing system. And there is no measure to alert the nearby people tool. [1]

"EMERGENCY ALERT APPLICATION TO ENSURE SAFTEY FOR WOMAN USING SMARTPHONES" was proposed by Revathy Rajendiran, Sarumathi Ramesh Kumar, Sushmithaa Kannan, Vishranthini Rajaram. The proposed system only shares the area of the victim which cannot always be accurate. And also, there is no feature of calling a guardian as well as alerting the nearby people. [2]

"ENHANCED FUNCTIONALITY EMERGENCY CALL APPLICATION FOR ANDROID", journal paper published by Dinesh Raut had the features of providing the location alert through SMS every 10 mins until guardian response to SMS and also placing a call when the location cannot be determined. But it is very difficult to find nearest hospital and police station nearer to the victim in an unknown area. [3]

"Emergency Alert System for Women's Safety" was proposed by Srijit Sinha, Sarnali Sengupta, Poulami Sarkar, Anita Singh. It was an IOT domain specific paper which shares the location of a victim once it detects user's fingerprint. But detecting fingerprint and then sending the location cannot be affordable in emergency situation since it can be a lengthy process. And also, it's difficult to carry the IOT gadgets and to handle them. [4]

” Android Based Emergency Alert Button” by Dhrubajyoti Gogoi, Rupam Kumar Sharma, provides the user with a SOS button on the home screen of user’s mobile when the button is pressed the SMS will automatically send to the given contacts numbers along with the location of the victim. [5]

” Stay Safe Application” by Indrajeet A. Mane, Jyotsna R. Babar, Snehal S, Sarika D. Pol the application provides the feature of sending the current location to the guardians of the victim when there is an emergency along with the images that are taken. [6]

“ABHAYA: AN ANDROID APP FOR THE SAFETY OF WOMEN” by Ravi Sekhar Yarrabothu, Bramarambika Thota provides the facility of sending the SMS with the current location of the victim for every five minutes which will be very helpful to track the remote location of the victim. But the problem with this app is that it cannot alert the nearby people and the victim cannot find the nearest hospital or police station when he is in emergency. [7]

“iReportMo: An Emergency Report Android Mobile Application for Metro Manila” by Joie Ann Maghanoy has the feature of storing the information about the emergency incident such as photos, time etc. And navigation is provided for the response by a person through map. [8]

“Advanced SOS App in Smartphone” by G. Shri Krishna, M.P. Lokesh the proposed system sends the pre recorded audio clip to the saved contacts instead of SMS and also place an emergency call. The current location will be sent if the emergency is an accident. [9]

“An Emergency Alert SMS and GPS Tracking application for Android Smartphones” by Zabiullah khan provides the feature that sends a SMS to the saved contacts for every selected time interval along with the current location of the victim but the proposed system cannot show the nearest hospital or police station and cannot alert the nearby people. [10]

III. PROPOSED SYSTEM

The proposed system is made in such a way that it must overcome the disadvantages of existing system along with the additional features that are not present in them.

The features of Proposed System are:

- A. **Sends SMS along with the call:** The proposed application provides the facility that the user can only send SMS or can only call to the given contact numbers and also, he can press the given SOS button that triggers both SMS to the three given contacts along with the location and a call to the first given contacts which is made automatically.
- B. **Fake Call:** The application contains a button that provides the facility of fake call. When the button is pressed the application automatically fetches the ringtone of phone and starts playing it along with the screen of incoming call.
- C. **Nearest Police Stations:** The application provides the feature of viewing the nearest Police stations in the google maps without even searching for it. So that the victim can report to the nearest station at the time of emergency.
- D. **Nearest Hospitals:** Along with the Police Station the application also provides the location of nearest Hospitals around the victim.
- E. **Emergency Alarm:** When the user presses the alarm button given in the app the configured alarm sound will be played in order to alert the nearby people that there is an emergency, the user may choose Police siren or Ambulance siren or normal siren as his alarm.
- F. **Self-assisting manual:** The application contains manuals to learn self-defence to protect himself from the possible threats and also there is manual for performing First Aid process for those who are in emergency in order to maintain safety.

IV. MODULES

- **Registration:** User needs to provide basic details like name, username, password, mail id, mobile
- **Login:** User can login using the credentials.
- **Edit Profile:** User can edit his profile details like name, mail and mobile
- **Add Members:** Add guardian details such as Name & Phone No
- **Edit Members:** User can edit member details
- **Save SMS:** User can type any SMS text and save it
- **View nearest hospitals:** View nearest hospitals with the use of Google Place API and display it on a map with directions and with contact details

- **View nearest police stations:** View nearest police stations with the use of Google Place API and display it on a map with directions and with contact details
- **First Aid:** The app also has a section where the first aid details are displayed.
- **Smart Alert:** When the panic button is pressed the SMS will be sent to the given contacts and a call is placed to the first contact automatically.

V. SYSTEM ARCHITECTURE



Fig. 1 Architecture of Emergency Assistance

VI. CONCLUSION

Being safe and secure is the requirement of the day. The idea behind this project is to design an Android app that acts as a personal security system. The app will deal with most of the critical issues faced by people and will help them to be secure. The app also helps to decrease the crime rate. The application not only help the users for being safe but also it will make sure that the family members will stay without any fear about the user, and provides a great help to the police too by providing the location of the victim. So, all the above points conclude that the app will not only be helpful to a single person but everyone around him which satisfies the motivation behind the development of this app.

VII. FUTUTRE ENHANCEMENT

- As there will be continues changes in the technology the application can be upgraded as per it.
- The application can be made in such a way that it should be able to take pictures (as evidence)
- The application can be made in such a way that it should be able to alert the nearby users along with the given

guardian list.

- The application can be made in such a way that the Emergency SMS will be sent by using the sensor instead of human interaction.

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