

# Shakti : An Android App for Mapping of Crime against Women

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## ABSTRACT

Women biggest issue we are facing today. Many apps have been developed to provide safety to women through Android phones. Many of the times government conduct different awareness events for stopping crime against women. But that's not enough; there are various kinds of crimes women are facing today. Now it's time to aid the roots of these crimes. This paper presents Shakti, an Android Application for mapping of crime against women. This will help the government to identify which crime has the highest frequency in a particular area and can implement an appropriate campaign for aiding its root cause. In case of an emergency, the victim can send its location along with a help message just by clicking the volume button 5 times. Also, the victim can reach-out to NGO for help. Shakti will feel like having family power with you at any time.

**Keywords :** Android, Women, Crime, Mapping, Location, Help message, NGO.

## I. INTRODUCTION

From past years, it has been recorded that the graph of crime against women has risen. Though the list of NGO's, Women Empowerment campaigns, safety applications, and more steps for the safety of women has continuously risen with time, the crime graph is still incrementing. There are various government bodies as well as private organizations working for women empowerment and helping the victims. But the call of today is to find the root cause of these crimes and treat it accordingly. Rape, Sexual assault, Domestic violence, Dowry, these are major of the crime list. Everyone is talking about empowering women, blaming society. What is making a society guilty? Is its people with narrow thinking and evil minds, and these are the causes of illiteracy, lack of life values, in short- the mindset of people.

In everyday Newspaper, some areas are in headlines for "Rape" and Sexual "Assault cases". Some areas are in the headline for "Domestic Violence". The projects

that the government runs for helping the victims are appreciable. How about not letting any women be a victim? For this, a study is needed for every area and the type of crime occurring most frequently.

"Dowry" can be aided with a literate society. "Domestic Violence" needs a little work on the mindset of the family; in-laws. "Rape" and "Sexual Assault" can be stopped if the females are equipped with right safety tools, and self-defense training.

### A. Existing Systems:

As a part of a literature survey, we investigated some applications that offer the same or similar services for Android and other platforms. The aim is to see how these applications work and to see how they can be improved.

The existing women safety apps:

Women Safety: This app is offered by Awesome Apps Inc. Released on 28th Aug 2015. With just a tap of a button, the app sends an e-mail to preconfigured

email ID(s) along with your location and a link to Google Map. The app also captures 2 pics, one with front camera and the other with the back camera, and a video or audio clip and uploads it to our server. A link to the pic, audio or video is emailed to a preconfigured email Id(s).

Limitation: It is not useful in case of emergency. Also, there is an issue in managing phone numbers. Also, the panic message has no notification, so no use if the other sees it later.

Raksha, A Women's Safety App: This app is offered by Portal Perfect, released on 27th May 2018. This app understands the worries and problems of dear ones, be it your child, mother, daughter, sister or wife. By using this application you can check their current location. The special feature of this app is "Are you in trouble" button.

Limitation: The emergency messages are not able to send. It also failed working many times.

My Safetipin: Personal Safety & Women Safety App. This app gives safety scores to an area and helps you to get alerts when you enter in an unsafe area. It helps in finding the safest route for you. You can also choose the alternate safe location when you give Google maps the access of this women safety app. SafetiPin collects primary data on Women Safety in public spaces at night, on a number of parameters.

- Lighting
- Visibility: Are there 'eyes on the street'. Can others see you
- Diversity: Presence of women and children around
- Crowd: How densely crowded is the area
- Public Transport: How close it is
- Walk Path: Is there a proper place to walk
- Security: Are police or private security nearby.
- Openness: Can you see all around
- Feeling: How safe do you feel

Limitation : You to keep this women safety app always running in the background which can drain the battery of your phone. It does not show every area of information. It gets crashed in cases.

redEye - Women Safety: This is a very useful app for women safety. It does not need any additional action by the user in any emergency situations. The app itself let your dear ones know that you are in danger through an alert alarm. In this app, the user will choose the source and the destination. The redEye app then keeps tracking you. If the app finds that the user's path has deviated or the user is idle in the same place for a configured duration, then the app will trigger the alert. Once you reach your destination safely you can manually disable the app.

Limitation: This app only allows 2500 uses per day by all users. More than 5000 people have downloaded the app, so only half or less than half users are able to use the app.

Here, we introduce an android app that ensures the safety of women. It reduces the risk and helps us in need by identifying the location of a person who is in danger.

## II. PROPOSED SYSTEM

For the need of surveying various areas and implementing appropriate programs in that area to diminish the roots of crime against women, we have developed an android application SHAKTI. In today's world android phone is a basic thing which everyone carries, with SHAKTI in your android phone women now will feel secure and protected all the time.

Following are the features of our Android application: The user will rate a type of crime for their particular area. This data will be graphically represented on our website.

In cases when the victim is unable to report against crime to the police, the victim can complain to the social NGO through this application.

The user will save three contacts of three family members. Whenever the user feels any danger like crime coming its way, the user can press volume key of its Android phone five times and an emergency message for help will be delivered to their family members along with the location URL through GPS.

Family members will also be notified if the victim's phone battery is below 20%.

Shakti: An Android app for mapping of crime against women is implemented into two modules: (1) Client-side, (2) Server Side.

(1)Client Side: Client-side involves the interaction of the user. The user can register in the application through their mobile number. Once registered they can log in any time. After successful login user first needs to enter its area and its pin code, select the frequently happening crime from the drop-down list and then rate the crime. In this way, the data about various areas will be collected from the user.

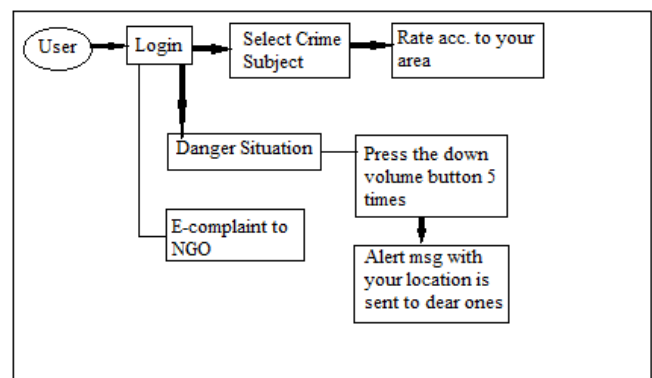
Next, the users need to enter three family members contact number with an emergency message. In the situation of any crime, the user will have to press the volume button five times. Saved emergency message will be forwarded to the saved contact numbers along with the victim's location through GPS.

The user can also ask for help to the NGO directly through our application.

In cases if the user's mobile battery drains below 20%, the app will send an alert message to the dear ones. Also user can set a secret code in the app. When the dear ones want to reach the user, they will send this secret code as a text message and they will automatically get the users mobile location through GPS .

(2)Server Side: Data entered by the users (members registered, crime reported, etc.) via the app is uploaded to the web server, the crime details for various areas will be graphically represented on the website and complaint is sent via text message to registered NGO for further processing and authenticity. Also, admins get all the privileges through this server.

#### BLOCK DIAGRAM



**Fig: 1.** Depicts the block diagram of server side

### III. IMPLEMENTATION

Shakti android application is being implemented using the following technologies: (1) Android (2) Java (3) SQL (4) Cloud (5) Web Technologies (6) Database (7) GPS

(1)Android: Android is the most widely used mobile OS motorized by Linux kernel. This is the first complimentary platform which is robust and is expected to gain much popularity. It was developed by Google team and allows writing managed code in the Java language. The current system is developed on the basis of android platform. Android utilizes a custom virtual machine that was designed to optimize memory and hardware resources in a smart phone. Android does not differentiate between the phone's core applications and third-party applications. Any application that is built will definitely have equal access to a phone's capabilities providing users

with a broad spectrum of applications and services (2) Java: Java is an object-oriented, class-based, concurrent, secured and general-purpose computer-programming language.

After front-end elements are finalized java classes and packages are used to make them work.

(3) SQL: Structured Query Language or SQL is a standard Database language which is used to create, maintain and retrieve the relational database. It is particularly used to work with structured data where there is a relation associated within the data itself.

(4) Cloud: Cloud storage involves stashing data on hardware in a remote physical location, which can be accessed from any device via the internet. Clients send files to a data server maintained by a cloud provider instead of (or as well as) storing it on their own hard drives.

(5) Web Technologies: The data collected in this android women safety application we be displayed using website.

(6) Database: A database is an organized collection of data, generally stored and accessed electronically from a computer system where databases are more complex they are often develop using formal design and modeling techniques.

Android comes with in-built SQLite database. SQLite supports all the relational database features.

(7) GPS: GPS or Global Positioning System is a satellite navigation system that furnishes location and time information in all climate conditions to the user. GPS is used for navigation in planes, ships, cars and trucks also. The system gives critical abilities to military and civilian users around the globe. GPS provides continuous real time, 3-dimensional positioning, navigation and timing worldwide.

#### IV. CONCLUSION

Shakti will help to easily know the major crimes against women and violence happening under

different areas. Thus, the social bodies working for the security of women can implement an aid to those areas to halt the crimes.

#### V. ACKNOWLEDGEMENT

First, and foremost we would like to thank God for the wonderful opportunities and challenges he has given to us. We express our sincere gratitude to our guide Prof. Prasanna Lohe, Head, Department of Computer Science and Engineering for his valuable contribution in fulfilling the requirement related to the project and for providing his valuable guidance, patience and for encouraging us to do our best.

#### Cite this article as :

Diksha Ingle, Pritee Dhale, Priyanka Palsapure, Sagar Pazare, Dhawal Chimurkar, Niket Farfad, Prof. Prasanna Lohe, "Shakti : An Android App for Mapping of Crime against Women", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 5 Issue 1, pp. 452-455, January-February 2019.

Journal URL : <http://ijsrcseit.com/CSEIT1951119>