

A Female Safety Mobile Application: FemSApp

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Abstract— Women's safety may be a concern of skyrocketing urgency in India and alternative countries. The first issue in handling these cases by the police lies in constraints emanating from them from responding quickly to calls of distress. These constraints embrace not knowing the placement of the crime and not knowing the crime is happening at all: at the victim's finish, reaching the police assuredly and discreetly may be a challenge. To assist with removing those constraints, this project introduces an associate application that has ladies with a reliable thanks for placing associate emergency decision. In today's world, people's use of smartphones has hyperbolic speedily, and hence, a smartphone will be used expeditiously for private security or numerous alternative protection functions. The monstrous incident that incensed the whole nation has wakened the US to travel for the security problems. Then several recent apps are developed to produce security systems for ladies via their phones. The user will quickly and discreetly trigger the Image and Video capturing operation by pressing the quantity up button. A message containing the user's geographical location, furthermore as contact details of a pre-selected list of emergency contacts, is instantly sent to the chosen contacts.

Keywords: Humanitarian Technology, Women's Safety, Smartphone Application, Android; GPS; URL; Registered Contact

I. INTRODUCTION

Women area unit accomplished at mobilizing numerous teams for frequent causes. They usually work across racial, sacred, self-opinionated, and intellectual divides to encourage tranquility. However, we tend to should acknowledge that they must be secured. A girl is not a lot of powerful than men physically during a crisis and desires assistance to alleviate them. The most effective thanks to minimize the probabilities of changing into a victim of a violent crime (robbery, statutory offense, rape, domestic violence) is to spot and turn resources to assist you out of dangerous things. Whether you are in instant bother or got separated from friends throughout the night and do not acumen to induce home, having this app on your phone will diminish your risk and produce help after you need it. Within the light-weight of recent outrage in a metropolis, Hyderabad, Uunao, that barrel the state and woke North American country to the protection problems for our daughters, the public is wheelwork upbeat in several ways in which to fight back. These women's protection application is meant to forestall crimes like an assault against seizure and stalking. A report compiled by the globe Health Organization in 2013 expressed that thirty-five % of girls worldwide had been victims of sexual violence. The National Crime Records Bureau of Bharat rumored that a girl is mistreated every 3 minutes. The police cannot facilitate, as info regarding the crime does not reach them in time, if at all. With the number of criminal acts towards girls increasing at such Associate in

appalling Nursing rate, it is evident that a technique is needed from the technical community to ameliorate matters.

II. LITERATURE SURVEY

- 1) Paper 1 Topic: A Mobile Application for Women's Safety: WoSApp Author: Dhruv Chand, Sunil Nayak, Karthik S. Bhat, Shivani Parikh, Yuvraj Singh, Amita Ajith Kamath. Year: 2015 This paper introduces a mobile application called WoSApp (Women's Safety App) that provides women with a reliable way to place an emergency call to the police. The user can quickly and discreetly trigger the calling function by shaking her phone or by explicitly interacting with the application's user interface via a simple press of a PANIC button on the screen. A message containing the geographical location of the user, as well as contact details of a pre-selected list of emergency contacts, is immediately sent to the police. This paper describes the application, its development, and its technical implementation.
- 2) Paper 2 Topic: M-WPS: Mobile-based Women Protection System Author: Vallidevi Krishnamurthy, Saranya. S, Sharanya Srikanth, Simran Modi. Year: 2015 A hands-free and internet-free android application to help women during threatening situations has been developed. The help request containing the user's (woman in danger) GPS coordinates are then forwarded to a network of emergency contacts and police control rooms via SMS. Unlike most mobile applications available in the market, a voice-triggered alarm allows the user to call for help quickly. As future work, the application can be implemented on other mobile platforms such as iOS and Windows for a wider reach. Though the application is primarily meant for women, it is not restricted exclusively for them and can be used by males, females, and kids alike.
- 3) Paper 3 Topic: Abhaya: an android app for the safety of women Author: Ravi Sekhar yarrabothu, bramarambika thota department of ECE vig- nan's university Year: 2015 This paper presents Abhaya, an Android Application for the Safety of Women, and this app can be activated by a single click whenever the need arises. A single click on this app identifies the place's location through GPS. It sends a message comprising this location URL to the registered contacts and calls on the first registered contact to help in dangerous situations. The unique feature of this application is to send the message to the registered contacts continuously for every five minutes until the "stop" button in the application is clicked. Continuous location tracking information via SMS helps find the victim's location quickly and can be rescued safely.
- 4) Paper 4 Topic: Survey on women's safety mobile app development Author: R.Pavitra, S.Karthikeyan electronics, and communications engineering PSNA

College of engineering and technology Dindigul. Year: 2015 The portable application assumes a critical part all over the world. To build up a portable application given the EPC stage. It is utilized to send a present area through SMS. It is effectively adjustable. The client's prerequisite adds specific functionalities. It gives a confident and safe condition framework when contrasted and alternate advancements. The preferred standpoint is, it inclines that it can consequently send SMS notices and demonstrate the present area of the individual on the Google delineate. It will diminish wrongdoings against women.

III. PROBLEM STATEMENT

Therefore, this project aims to effectively build a robust platform for women's empowerment in our society. We endeavored to achieve this by creating a mobile application named "FemSAPP(Or Any Name You Want)-Right to safety" Using Android, we will implement SMS sending, Image capturing, audio recording, Accessing GPS Locations. Through GPS, the current address of the one in danger is converted into SMS and can be sent to any contact depending on the user.

IV. OBJECTIVE

To develop an adaptive system for the End-users that support the system support features. It should be a highly secured authentication system. It maintains privileges among the set of users. The emergency alert feature activates with the user's command, and the system is protected after the alert process. The functionality will be transparent to the end-user and easy to use.

V. SYSTEM SPECIFICATION

A. Software Specification

Operating System: Windows 10, Android Studio,
Front end: Java Programming, Android SDK 2.3,
Back end: SQL-lite

B. Hardware Specification

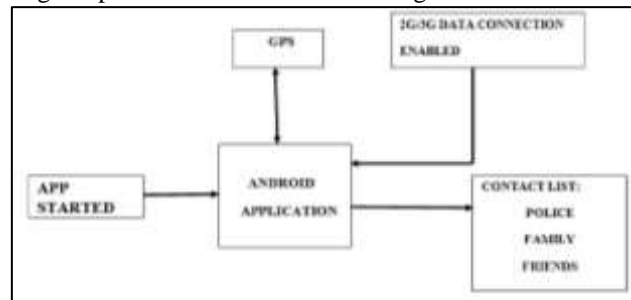
4 CPU System,
Having Clock Speed of 3.0GHz,
4GB RAM (Minimum Required for Desktop)

VI. SYSTEM ARCHITECTURE

A system design or systems design is the abstract model that defines the structure, behavior, and additional views of a system. Associate design description may be a formal description and illustration of a system, organized during a means that supports reasoning regarding the structures and behaviors of the system. The system architecture will include system parts, and therefore the subsystems developed that may work along to implement the general system. There are efforts to formalize languages to explain system design, put together these area units known as design description languages (ADLs).

The project introduces a mobile application i.e. femsapp that provide women with a reliable way to place an emergency call to police. The user can discreetly press the

volume button at twice by which the camera will capture an image of person and the voice recording will also start.



A link containing the GPS location of the user along with the image and voice recording will be sent to the preselected contact list.

VII. MODULE DESCRIPTION

- GPS Location Module
- Image Capturing Module
- Audio Capturing Module
- Notification Module

1) GPS Location Module

The location of the user is tracked. The location is sent in SMS in URL form. The URL is directed to G-Maps. Even then, the shortest path is detected. The exact location is detected quickly.

2) Image Capturing Module

After the function is triggered, Images from the front and back camera are captured. Also, the images are stored in the devices and the database. Along with this, these are backed up in the cloud. The SMS sent to the contacts also contains a link if images.

3) Audio Recording Module

After the function is triggered, audio is recorded. This audio is stored in the device and even in the database. Along with this, it is backed up in the cloud.

4) Notification Sending Module

An alert is generated, which is sent to all the other users. Also, this goes to the dashboard provided to securities.

VIII. ALGORITHMS DETAILS

A. Decision Tree

Decision Tree algorithmic rule belongs to the supervised learning algorithms. In contrast to different supervised learning algorithms, the choice tree algorithmic rule is also used to find regression and classification issues.

The goal of employing a call Tree is to form a coaching model that will predict the category or worth of the target variable by learning easy call rules inferred from previous information (training data).

B. KNN algorithmic rule (K-Nearest-Neighbor)

K-Nearest-Neighbor is employed in field pattern recognition. It learns by analogy, i.e., by comparison, a given take a look at tuple with coaching tuples area unit the same as it. The coaching tuples have n attributes, and each tuple represents a degree in n-dimensional house. All coaching tuple area units hold on in associate n-dimensional pattern house-Nearest-Neighbor searches the pattern space for the k coaching tuple that area unit highest to the unknown takes a look at tuple.

The k coaching tuple area unit is the kth nearest neighbor” of the unknown tuple. Closeness is outlined exploitation distance metrics like geometrician distance. The Manhattan (City block) distance or different distance measurements may be used. The formula is given below. Search out the geometrician distance between 2 points or tuples. Let. $Y1=y11, y12, y13 \dots y1n$ And. $Y2=y21, y22, y23, y2n$
Distance $(Y1, Y2) = (y11-y21)^2$

IX. CONCLUSION

Our app is a straightforward method for a woman to place an emergency call when in a crisis. All the users should press the volume button twice on the phone. An emergency message containing her GPS coordinates and pre-selected emergency contacts is immediately and automatically sent to the police, after which a call to a dedicated police helpline is placed & the camera and voice recording will start. No user intervention is required whatsoever if it cannot be easily given. The police receive an audio alert, images & the location of the crisis is plotted on a Google Maps interface at their station.

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