

Women's Smart Intelligent Security System

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ABSTRACT: Since more and more individuals in the modern world are using smartphones, a smartphone can be effectively used for personal security and other types of protection. The shocking incident has made us more aware of the need for security measures. Because of these problems, new apps have been created to give women protected systems via their smartphones. The smart, intelligent security system for women is the subject of this project. Physical harassment of women is a global problem. Due to a lack of adequate close inspection of the system, this advances quickly. Our initiative is an effort to find solutions to these issues that are present in our environment. For the safety of women, an Android application has been created that can be launched with a simple click if the situation calls for it. A message including this location URL will be sent to the registered contacts to assist the person in perilous situations after a single click on this app or a hard shaking of the smart phone locates a spot through GPS. When the "stop" button in the application is clicked or the women's phone is shaken firmly, this application's special feature sends a message to the registered contacts. In order to immediately determine the women's whereabouts and assist in their safe rescue as soon as possible, the location URL is supplied for tracking information by SMS.

KEYWORDS: Android, GPS, URL, Registered Contacts, Smartphone

I. INTRODUCTION

For the benefit of their families, women work. In both the family and society as a whole, women's security is extremely important. We must acknowledge that because they are the foundation of the family, they should be adequately protected. When compared to men, women are physically

weaker, which makes them more dependent on others for assistance when they need to relieve themselves. The greatest method to reduce the likelihood that she will experience a violent crime (such as a robbery, sexual assault, rape, or domestic abuse) is to identify and seek out resources to get her out of dangerous circumstances. Having these apps on your phone can lower your risk and bring assistance when you need it, whether you are in an emergency situation or got separated from pals at night or I'm lost and unsure of how to get home in a crowded place. The best way to lessen the likelihood that she may be a victim of a violent crime (like a robbery, sexual assault, rape, or domestic abuse) is to locate and employ the options available to remove her from perilous situations. When you need help, whether you are in an emergency situation, got separated from friends at night or in a crowded environment, having these apps on your phone can reduce your danger and provide it. Many new apps have been created to give ladies on their phones security systems. Here, we've introduced an Android app to ensure the protection of ladies. By locating the person who is in danger, it reduces the risk and will be helpful to us when we are in need. We employed Internet of Things technologies in our paper (IoT). IoT is being used to link the woman to her relatives. We created an Android software that can collect ambient noise for security purposes and deliver emergency messages to contacts that have been added to the contact list. Due to the fact that we won't be able to foresee the hazardous situations beforehand, this application will be more beneficial. By using this programme, we can send a women's emergency message to notify our relatives and friends. Here, we've introduced an Android app to ensure the protection of ladies. By locating the person who is in danger, it reduces the risk and will

be helpful to us when we are in need. We employed Internet of Things technologies in our paper (IoT). IoT is being used to link the woman to her relatives. We created an Android software that can collect ambient noise for security purposes and deliver emergency messages to contacts that have been added to the contact list. Due to the fact that we won't be able to foresee the hazardous situations beforehand, this application will be more beneficial. By using this programme, we can send a women's emergency message to notify our relatives and friends. The primary goal of the project is to create an Android application that shows the safest route for travel at any moment and in any location.

II. PROBLEM STATEMENT

There is no adequate security now for women travelling alone. These days, travelling safely has gotten increasingly difficult. Sexual harassment, rape, and robbery are just a few of the issues that women face globally. To get around this, we are developing an Android app that will help you find the best and safest route. based on the previously entered feedback, recommending the safest route for the women to take between source and destination. The safest route will be recommended.

III. EXISTING SYSTEM

There is a panic button in systems that are now in use, like Nirbhaya, Ola, and Uber, that allows users to communicate the specified location to her emergency contacts.

SECUREME BETA^[7]: -This application was created in honour of International Women's Day. When a woman is in need, it will contact the community for assistance. It also has three crisis functions that may be activated by simply pressing a button. Your current location is automatically updated on Facebook according to the user. An alert is then triggered on your phone with a loud volume to send SMS to selected associates in your neighbourhood.

STREET SAFE^[8]: - This application was created in honour of International Women's Day. It contains three crisis functions that may be activated with the simple push of a button, and it will call the community to assist women in any emergency. Your current location is immediately updated on your Facebook account. An alert is then triggered on your phone with a loud volume to send SMS to selected associates in your neighbourhood.

ABHAYA^[3]: - This Android application sends an emergency message via Facebook, updates the user's location, and sounds an alarm when

necessary. The family or friends who are in the area will receive an SMS.

WoSAPP^[11]: - WoSApp was created using the Rapid Application Development (RAD) model methodology. The local police station will receive an emergency message and phone call when the PANIC button on the screen is activated.

Nowadays, several institutions employ RFID tags on vehicles to track which ones are driving onto the campus. These badges are used to keep track of how many vehicles, both official and private, enter the campus.

These days, the emergency button is also available in the Ola and Uber apps. WoSApp was created using the Rapid Application Development (RAD) model methodology. The local police station will receive an emergency message and phone call when the PANIC button on the screen is activated.

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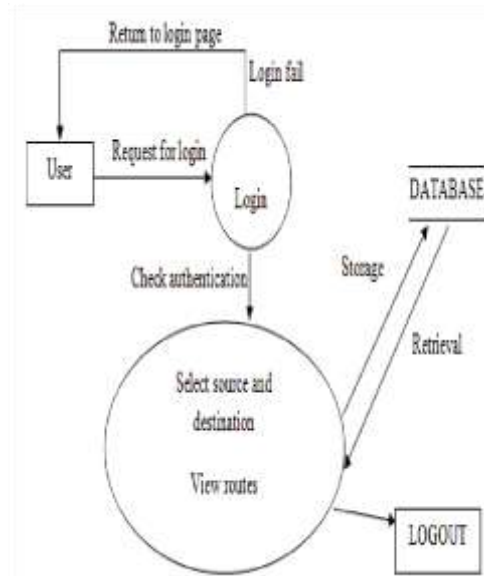
IV. PROPOSED SYSTEM

Artificial intelligence (AI) is capable of powerful data collection. It will be able to spot and decipher patterns. AI makes recommendations to consumers based on patterns and uses its power to ensure their safety. Apps for women's safety use AI and machine learning to gather data and spot patterns over time. When other users follow a specific route to their destination, it will later give the same data for them in pregenerated reports.

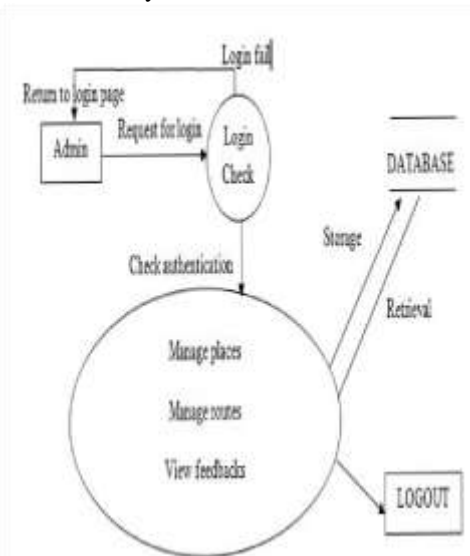
- A. Registration:** Individuals should register both themselves and their trusted emergency contacts.
- B. Source and Destination entry:** Enter the starting point and ending point of your journey.
- C. View recommendation:** The user will be offered the safest route to go based on the previously provided comments.
- D. Give feedback:** Provide input on the route you've taken so that the routes can be updated to reflect the state of the route.
- E. Emergency:** When the emergency button is hit in an emergency situation, the surrounding audio is recorded and a message with the location is sent to emergency contacts.



System Architecture



User dataflow diagram



Admin dataflow diagram

V. METHODOLOGY

TOKENIZATION



- Raw text is not used as an input for deep learning models: Deep learning makes use of numerical tensors. converting text into tensors of numbers. Text vectorization is the method in question. This can be done in a variety of ways, including word-by-word text segmentation and word-to-vector conversion.text, and each character is transformed into a vector.
- Words or characters are broken down into "N-grams," which are then transformed into vectors.
- "N-grams" are overlapping collections of several words or characters that follow one another. Tokenization is the process of creating tokens, which are the different units into which text (words, characters, or Ngrams) can be broken down.After text vectorization, a tokenization process is used, and the resultant tokens are then correlated with numerical vectors.Deep neural networks are fed these

vectors in the form of sequence tensors. We have several different ways to link a vector to a token. We will discuss two main categories: token one-hot encoding and token embeddings, also known as "word embeddings" because they are typically employed just for words.

VI. EXPERIMENTAL RESULTS

In our application, we show the women the safest route to take to get there. Based on prior user feedback, the application provides a multiple colour path from source to destination. On the basis of user feedback, the colours of the pathways are automatically modified. When the emergency button is pressed or the phone is shaken vigorously, a 30-second voice recording will occur. The female mobile device will store the voice recording, and the emergency message will include the location URL and be forwarded to the contacts listed in the programme.

The various routes between source and destination are depicted in Snapshot 1. The route that is the safest will be displayed in green, while the route that is the most dangerous will be in red.

Snapshot 2 displays the emergency message with the current location URL that the user submitted to the contacts database.



Snapshot 1: Multi-colored paths



Snapshot 2: Message sent by the women

VII. CONCLUSION

We created an Android app that ensures the safest route for women in our project, it can be inferred from the results and application that have been developed. The optimum travel path is offered to the user when the user enters the source and destination addresses, allowing data to be collected from the database. This enables the user to determine the optimal, safest path based on previously gathered user feedback. Through a number of services that enable map integration, the Google map API is used to modify maps and contribute material to the map. Thus, by knowing the safe route, our programme gives women the security and freedom to travel wherever. Our programme differs from other ones already on the market in that it automatically refreshes the database based on previously provided comments. This feedback and experience data are used by the app to create heat maps. The location URL will be sent with the message. The women's phone's internal storage will contain voice recordings of the environment.

VIII. FUTURE SCOPE

In future, we can enhance auto call facilities that could also be incorporated which make the women safer. We can add shooting of video at the time of emergency that helps in reaching the criminal very easily. It also provides

evidence against the crime. We can also save the photos and videos on the drive so that it will be easily used further. Prototype can be further calibrated into complete market product which will be made with chips and utility hardware so that it can be attached to public transport vehicles that will help every person to know about the location of their nearest contact person. In the future, we can improve the automatic call features that could potentially be included, making the women safer. Adding video recording during an emergency will make it much easier to capture the offender. It also offers proof that the crime wasn't committed. Additionally, we can store pictures and films on the drive for later use. The prototype can be further adjusted to create a finished product for the market that will be produced with chips and useful hardware and attached to public transportation vehicles to help everyone know where their closest contact is.

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