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Women Safety App for Improved Personal Security

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Abstract: ***Women's safety is a crucial problem that society must address. Eve teasing, sexual assaults, and domestic abuse are just a few of the crimes against women whose frequency is rising daily. A smartphone may be the simplest method to get assistance when security is an issue. The goal of this project is to develop an Android Application that will aid in protecting women in whatever circumstance they may encounter on a daily basis. We have developed a straightforward Android application that includes a number of safety features that women may use with only a few taps on the screen to quickly and easily get aid or to avoid and flee a dangerous situation. It makes it quick and easy for the user's registered contacts to learn when they are in distress and to get in touch with them by using GPS position monitoring. It also has safety features including a voice recording that a lady or the police may use as situational proof or identification, as well as a siren to alert passersby of any inappropriate behavior, spy camera detection to find hidden cameras, and emergency helpline numbers that can be used to connect directly to emergency services based on the situation women are in for their safety.***

Keywords: Java, Firebase, Mobile Application, Magnetometer Sensors, Android Studio, Media Sharing, GPS (Global Positioning System)

I. INTRODUCTION

The safety of women has been a major concern in society for a long time. Incidents of harassment, violence, and sexual assault against women are unfortunately common in many parts of the world. To address this issue, a women safety app has been developed to provide improved personal security. This app is designed to empower women with the tools and resources they need to feel safe and secure in their daily lives. The women safety app offers various features such as emergency alerts, GPS tracking, real-time communication with trusted contacts, spy camera detection, women's news, and Siren alert to deviate the person. Any mobile device can access the app, which is simple to use. With just a single click, women can send an alert to their emergency contacts, providing them with their location and the nature of the emergency. In addition to emergency features, the app also includes safety tips and resources for women. It offers information on self-defense techniques, safety precautions, and legal rights. Furthermore, the app provides a community forum where women can connect with other users to share their experiences and seek support.

II. LITERATURE SURVEY

1) *K.Srinivas, T.Susmitha*-In this project, you can use anything that the user might find helpful if they run into issues or need assistance. A HELP button is visible when the user launches this programme. They can also save three contact numbers and a note. When the user is in some difficulty or needs any help button. So, when the user opens this application can see a HELP button. To register a user, click that button to send an SMS.
2) *RashmiDeodhe*- This project Provides facilities to keep women safe by providing this kit. Women feel insecure at this point, so you can push the GPS button to calculate the area's latitude and longitude coordinates. The controller reads this value and Sends this data to a defined number stored in the program.

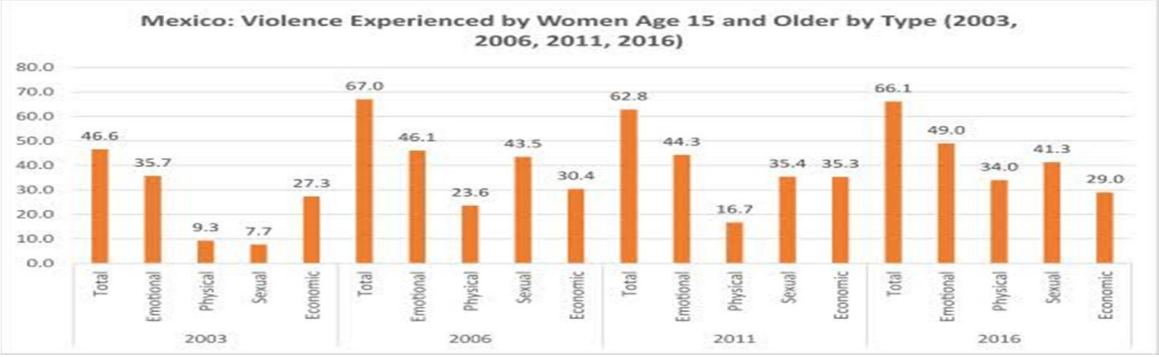


Figure.1: Proportion of crimes against women

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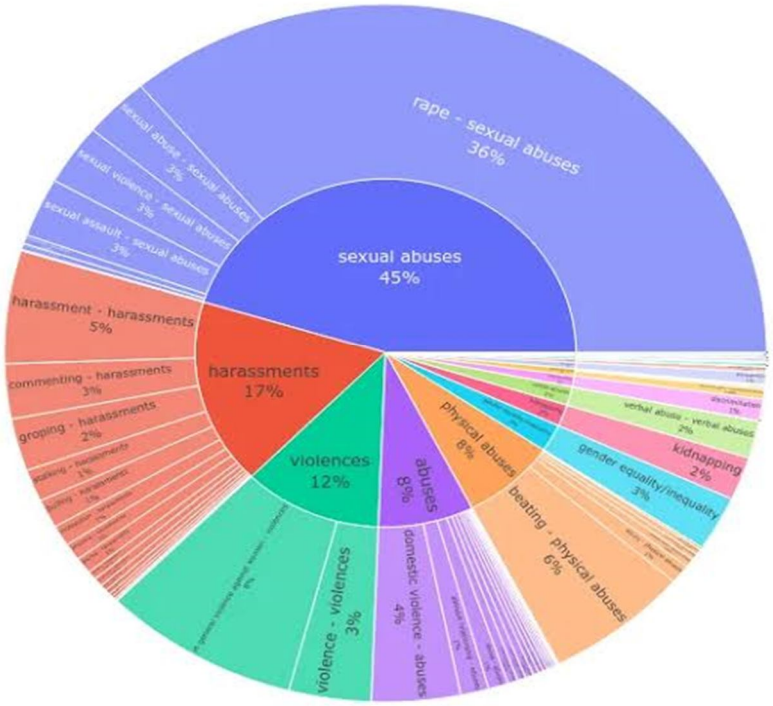


Figure.2: Types of women abuses

III.PROPOSED SYSTEM

The proposed system for a women safety app with GPS tracking, detection of hidden cameras using a magnetometer, women's news, emergency SOS for sending distress signals to guardians, control room for emergency situations, a panic button for siren sound to deviate the person in conflict, and some extra features concerning women safety include the following:

1) GPS Tracking: This feature will enable the app to track the user's location in real time and send the location details to the user's emergency contacts. This feature can be particularly useful in case of kidnapping or abduction.

2) Detection of Hidden Camera using Magnetometer: This feature will allow users to detect hidden cameras in their surroundings using their phone's magnetometer. The app will alert the user if it detects any magnetic field anomalies that could indicate the presence of hidden cameras.

3) Women's News: This feature will provide users with the latest news related to women's safety and rights. It will help users stay informed about the latest developments in the field of women's safety.

4) Emergency SOS for Sending Distress Signals to Guardians: This feature will enable users to send distress signals to their emergency contacts by pressing a button on their phones. The app will automatically send the distress signal along with the user's location details to their emergency contacts.

5) Emergency SOS for sending a distress signal to the guardian and control room: In case of an emergency situation, users can send a distress signal to their guardian and the control room, providing them with their current location, details of the situation, and any other relevant information.

6) Panic Button for Siren Sound to Deviate the Person in Conflict: This feature will allow users to press a button to sound a siren that can be used to distract or deviate the person in conflict. The sound will be loud enough to alert people nearby and can be used as a deterrent against attackers.

7) Extra Features Concerning Women Safety: This feature will include additional safety features like safety tips, self-defense techniques, emergency contact numbers, and a database of safe locations.

IV.METHODOLOGY

The waterfall model is a sequential software development process that consists of several phases. Each phase must be completed before moving on to the next phase. The following is an overview of how the waterfall model can be applied to the development of a women safety app for improved personal security:

1) *Requirement Gathering:* In this phase, the requirements for the women safety app will be gathered. This will include identifying the app's target audience, the features required, and the expected outcomes. The requirements will be documented and used as a basis for the development process.
2) *Design:* In this phase, the app's overall architecture and design will be created. The design will include wireframes, storyboards, and user flows to outline the app's features, user interface, and functionality.
3) *Implementation:* In this phase, the app's code will be written, and the app's features will be developed. This phase will involve both front-end and back-end development.
4) *Testing:* In this phase, the app will be tested to ensure that it meets the requirements and functions as expected. This will include functional testing, user acceptance testing, and performance testing.
5) *Deployment:* In this phase, the app will be deployed to the app store or other distribution channels. The app will be made available to the public and monitored for any issues that may arise.
6) *Maintenance:* In this phase, the app will be maintained, updated, and improved over time. This will include fixing any bugs, adding new features, and addressing any user feedback.

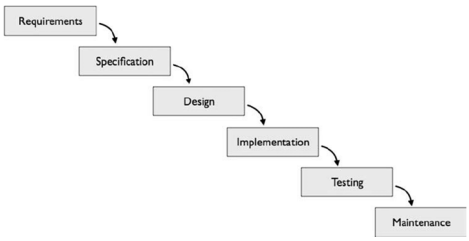


Figure.3: Waterfall Model

V. ARCHITECTURE DIAGRAM

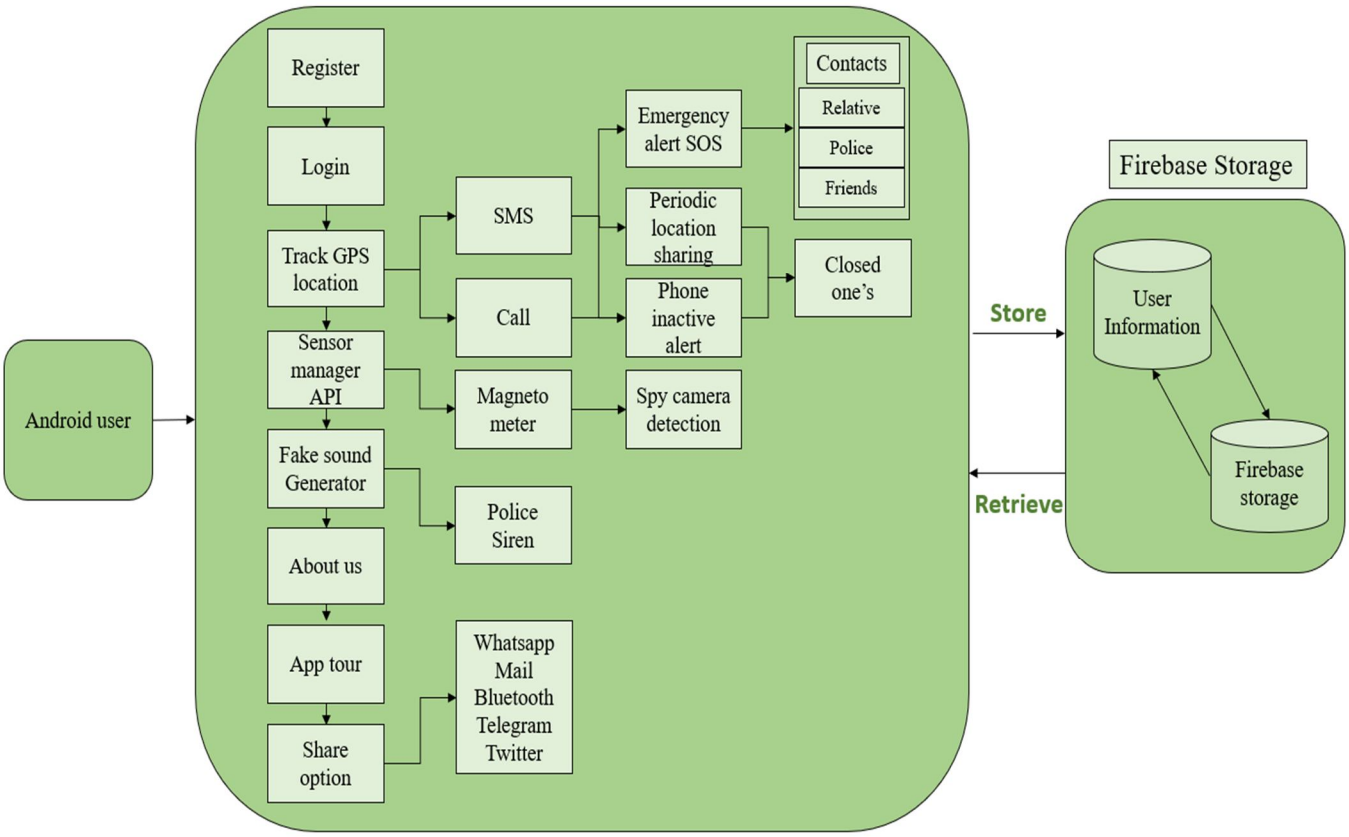
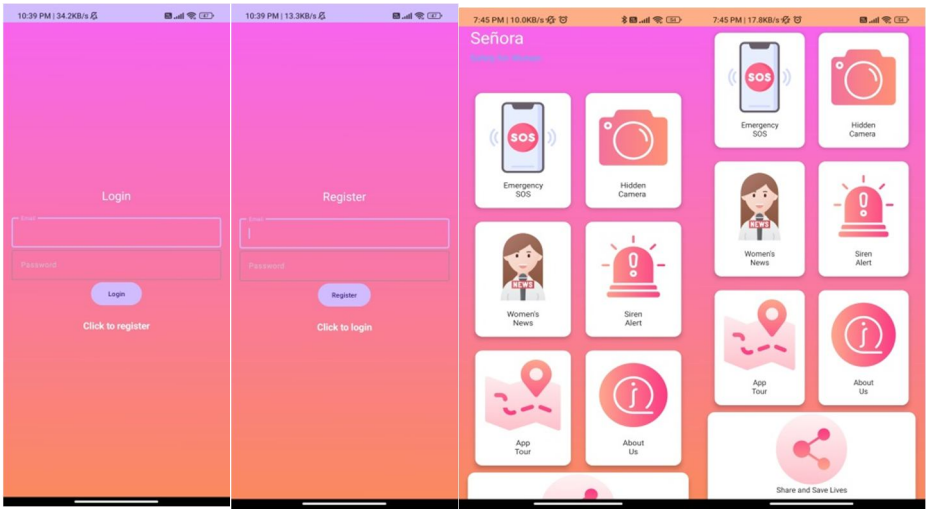
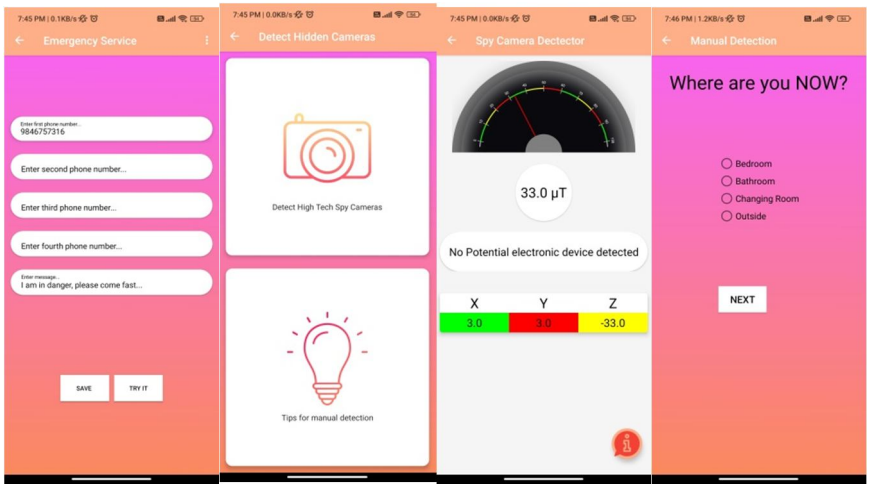
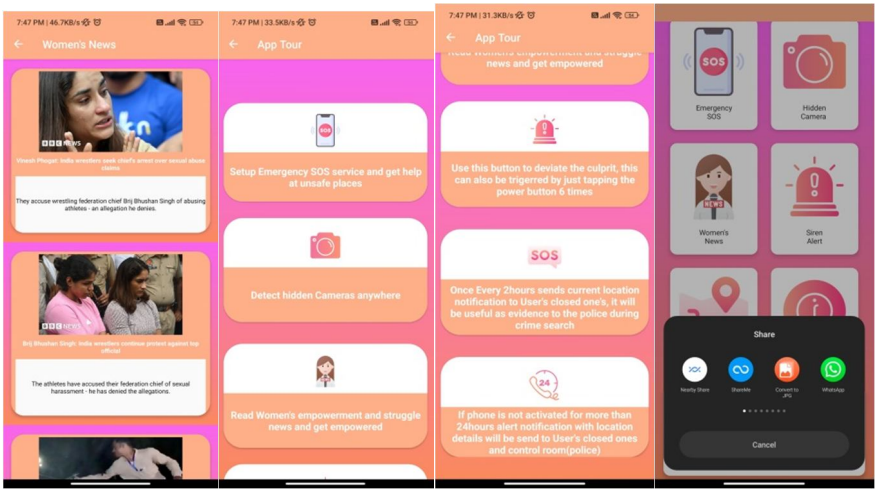


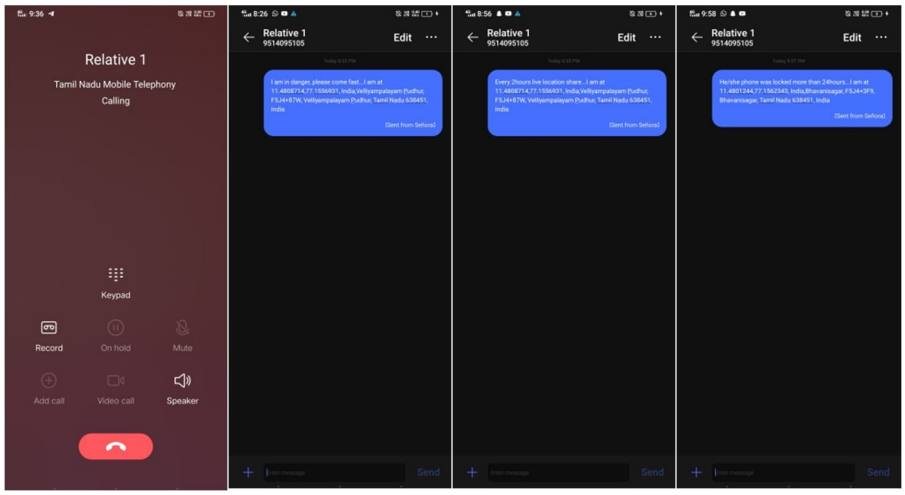
Figure.4: Architecture Diagram

VI. RESULT


Login
Register
Click to register
Click to login
Señora
Emergency SOS
Hidden Camera
Women's News
Siren Alert
App Tour
About Us
Share and Save Lives


Emergency Service
Detect Hidden Cameras
Spy Camera Dectector
Manual Detection
9846757316
Enter second phone number...
Enter third phone number...
Enter fourth phone number...
I am in danger, please come fast...
SAVE
TRY IT
Detect High Tech Spy Cameras
Tips for manual detection
33.0 µT
No Potential electronic device detected
X
Y
Z
3.0
3.0
-33.0
Where are you NOW?
Bedroom
Bathroom
Changing Room
Outside
NEXT


Women's News
App Tour
Setup Emergency SOS service and get help at unsafe places
Detect hidden Cameras anywhere
Read Women's empowerment and struggle news and get empowered
Use this button to deviate the culprit, this can also be trigerred by just tapping the power button 6 times
SOS
Once Every 2hours sends current location notification to User's closed one's, it will be useful as evidence to the police during crime search
If phone is not activated for more than 24hours alert notification with location details will be send to User's closed ones and control room(police)
Share
Cancel



VII. FUTURE SCOPE

The future scope for a women safety app for improved personal security is vast, and there are numerous possibilities for its development. Here are some potential areas for future enhancement:

1) Artificial Intelligence (AI) integration: One possible future enhancement could be the integration of AI, which can help the app learn the user's behavior, preferences, and patterns to provide personalized safety recommendations and alerts.

2) Wearable Technology Integration: Another possible future enhancement is the integration of wearable technology like smartwatches or fitness bands to provide an additional layer of safety and monitoring.

3) Voice-activated Features: Voice-activated features could be another potential enhancement, which will allow users to activate safety features using their voice commands.

4) Community-based Safety: Future development could also incorporate a community-based safety feature that allows users to share their location with their trusted contacts, who can then monitor their safety in real time.

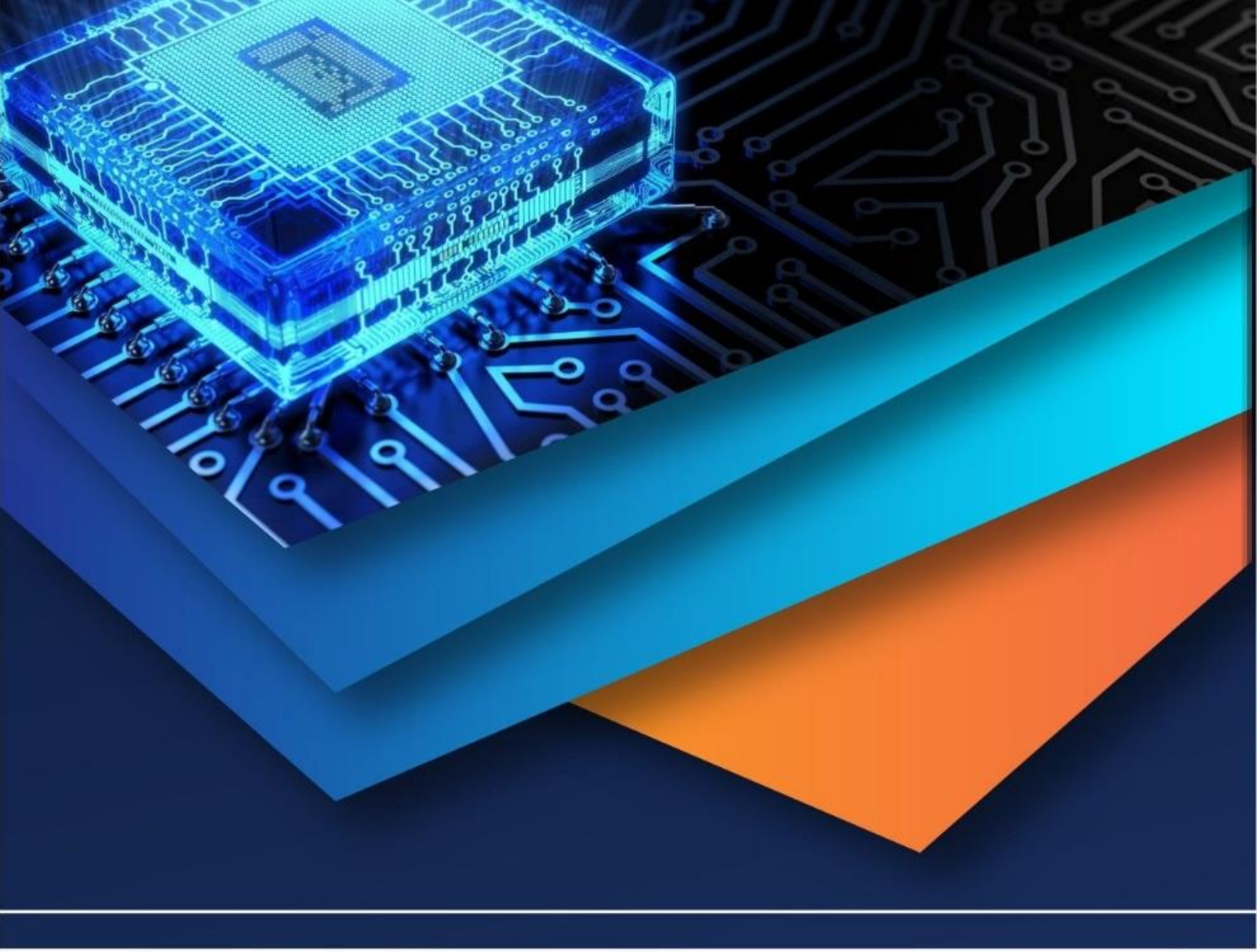
5) Machine Learning: Machine learning can be applied to analyze and identify patterns in data collected by the app, which can be used to provide more personalized safety recommendations and alerts.

VIII.CONCLUSION

In conclusion, a women safety app for improved personal security can be an effective solution for reducing incidents of harassment and violence against women. By providing emergency features, safety resources and tips, community support, and additional features, the app can empower women and provide them with the necessary tools to stay safe.The literature review highlights the importance of user-friendliness, accessibility, and ongoing development to ensure the effectiveness of such apps. It is essential to design the app in a way that is easy to use, with features that can be easily accessed in case of an emergency. In addition to providing immediate support and assistance during emergencies, a women safety app can also create a sense of community among women, allowing them to share their experiences and provide support to one another Overall, a comprehensive women safety app can be an effective tool in creating a safer environment for women. By promoting awareness, providing support and resources, and facilitating communication, the app can help women feel more secure and confident in their daily lives.

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