iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 14 **Issue:** III **Month of publication:** March 2026

DOI: https://doi.org/10.22214/ijraset.2026.78568

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 14 Issue III Mar 2026- Available at www.ijraset.com

Smart Women Safety Application Using Android Technology

Khushi Shinde, Mansi Kawade, Govinda Shravan, Omkar Keripale, Swapnali Ahirekar
Diploma in Computer Engineering TSSM BSCOER Narhe Pune, India

Abstract: ***Women safety has become a critical issue in modern society due to increasing incidents of harassment and violence. Smartphone technology provides an opportunity to develop applications that help improve personal safety and enable faster emergency response.***
This research paper presents the design and development of a Smart Women Safety Application using Android technology. The proposed system allows users to send emergency alerts, share real-time GPS location with trusted contacts, and quickly access safety tools during dangerous situations.
The application integrates Google Maps API, GPS location services, and a cloud-based database to ensure fast and reliable communication.
Additional features include trusted contact management, profile settings, and location tracking through map integration. The objective of the proposed system is to provide a simple, reliable, and easily accessible mobile solution that enhances personal security for women.
The research focuses on the design architecture, system modules, implementation technologies, and advantages of the system. The results show that mobile safety applications can significantly reduce response time in emergencies and improve communication with trusted individuals.
This system can serve as an effective digital safety tool for women in public places, workplaces, and during travel.
Keywords: Women Safety, Android Application, Emergency Alert System, GPS Tracking, Mobile Security, Location Sharing.

I. INTRODUCTION

Women safety has become one of the most important social issues worldwide. In many countries, women face safety concerns while traveling alone, working late hours, or visiting unfamiliar places.
Despite improvements in security systems and law enforcement, emergency situations still occur where immediate help is required. With the rapid growth of smartphone usage, mobile technology provides new opportunities to address these problems.
Smartphones include several built-in technologies such as GPS, internet connectivity, sensors, and messaging services. These technologies can be used to create mobile applications that provide instant emergency support.
Women safety applications allow users to quickly send alerts, share their location, and notify trusted contacts during dangerous situations.
The proposed Smart Women Safety Application is developed using Android technology.
The application provides features such as emergency SOS alerts, real-time location sharing, trusted contact management, and user profile settings.
The main objective of the system is to provide a fast and reliable safety tool that can be used easily in emergency situations. This research paper explains the problem statement, objectives, system architecture, implementation technologies, advantages, and future scope of the proposed women safety system.

II. LITERATURE REVIEW

Several researchers have proposed mobile safety applications for women using smartphone technologies. Earlier systems focused mainly on sending SMS alerts during emergency situations.
However, modern systems integrate GPS location tracking and internet-based communication to provide more accurate information.
Some existing applications allow users to press a panic button that sends an alert message to emergency contacts. Other systems provide features such as voice activation, shake detection, and location tracking through maps.
Despite these developments, many applications still face limitations such as slow response time, complex user interfaces, and limited contact management features.

©IJRASET: All Rights are Reserved

Therefore, there is a need to design a simple and efficient safety application that provides quick communication and accurate location sharing.

The proposed system improves existing approaches by combining location tracking, emergency alerts, and contact management in a single user-friendly Android application.

III. PROBLEM STATEMENT

Women often face situations where they feel unsafe while traveling alone or during late hours.

In such cases, it becomes difficult to quickly contact family members or authorities and provide accurate location information.

The main problems identified are:

1) Delay in sending emergency messages.
2) Difficulty in sharing exact location during emergencies.
3) Lack of quick safety tools within smartphones.
4) Limited awareness of available safety technologies.

To address these problems, a mobile-based safety application is required that allows users to instantly send alerts and share their location with trusted contacts.

IV. OBJECTIVES

The major objectives of the proposed system are:

1) To design and develop a mobile application that enhances women safety.
2) To provide a quick SOS emergency alert system.
3) To allow users to share real-time GPS location with trusted contacts.
4) To develop a simple and easy-to-use interface.
5) To integrate map services for accurate location visualization.
6) To provide profile and security settings for user management.

V. PROPOSED SYSTEM

The proposed Women Safety Application is designed to provide immediate support during emergency situations.

The application allows users to register and manage their profile information.

Users can add trusted contacts who will receive alerts when the emergency feature is activated.

When the user presses the SOS button, the system automatically sends an alert message along with the user's current GPS location to the saved contacts.

The application also displays the current location on a map using Google Maps API.

The system includes the following main modules:

User Registration Module – allows new users to create an account.

Login Module – authenticates users securely.

Profile Management Module – allows users to update personal details.

Trusted Contacts Module – enables users to add or remove emergency contacts.

Location Tracking Module – tracks and shares real-time GPS location.

Emergency Alert Module – sends SOS messages to trusted contacts.

VI. SYSTEM ARCHITECTURE

The system architecture consists of three main components:

1) Android Mobile Application – This acts as the front-end interface where users interact with the system.
2) Cloud Database – Stores user data, profile information, and trusted contact details.
3) GPS and Map Services – Used to track the user’s real-time location and display it on the map.

The Android application communicates with the database to store and retrieve user data.

GPS services provide location information which is shared with trusted contacts during emergencies.

The integration of these components ensures reliable communication and efficient system performance.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

VII. TECHNOLOGIES USED

The development of the application uses several modern technologies:
Android Studio – Development environment used to build the application.
Java / Kotlin – Programming languages used for Android development.
Firebase – Cloud database used to store user data and contacts.
Google Maps API – Provides map integration and location visualization.
GPS Technology – Used for real-time location tracking.
These technologies ensure that the application operates efficiently and provides accurate location information during emergencies.

VIII. ADVANTAGES

The proposed system provides several advantages:
1) Quick emergency response.
2) Real-time location sharing.
3) Easy and user-friendly interface.
4) Improved personal safety awareness.
5) Reliable communication with trusted contacts.
6) Works on most Android smartphones.
These advantages make the system an effective solution for enhancing personal safety using mobile technology.

IX. FUTURE SCOPE

The system can be further improved by integrating additional advanced features such as:
Voice activated emergency alerts.
Automatic police notification system.
Artificial intelligence based danger detection.
Fake call feature for escaping unsafe situations.
Safety route suggestions using map analysis.
These enhancements can make the application more intelligent and effective in protecting users.

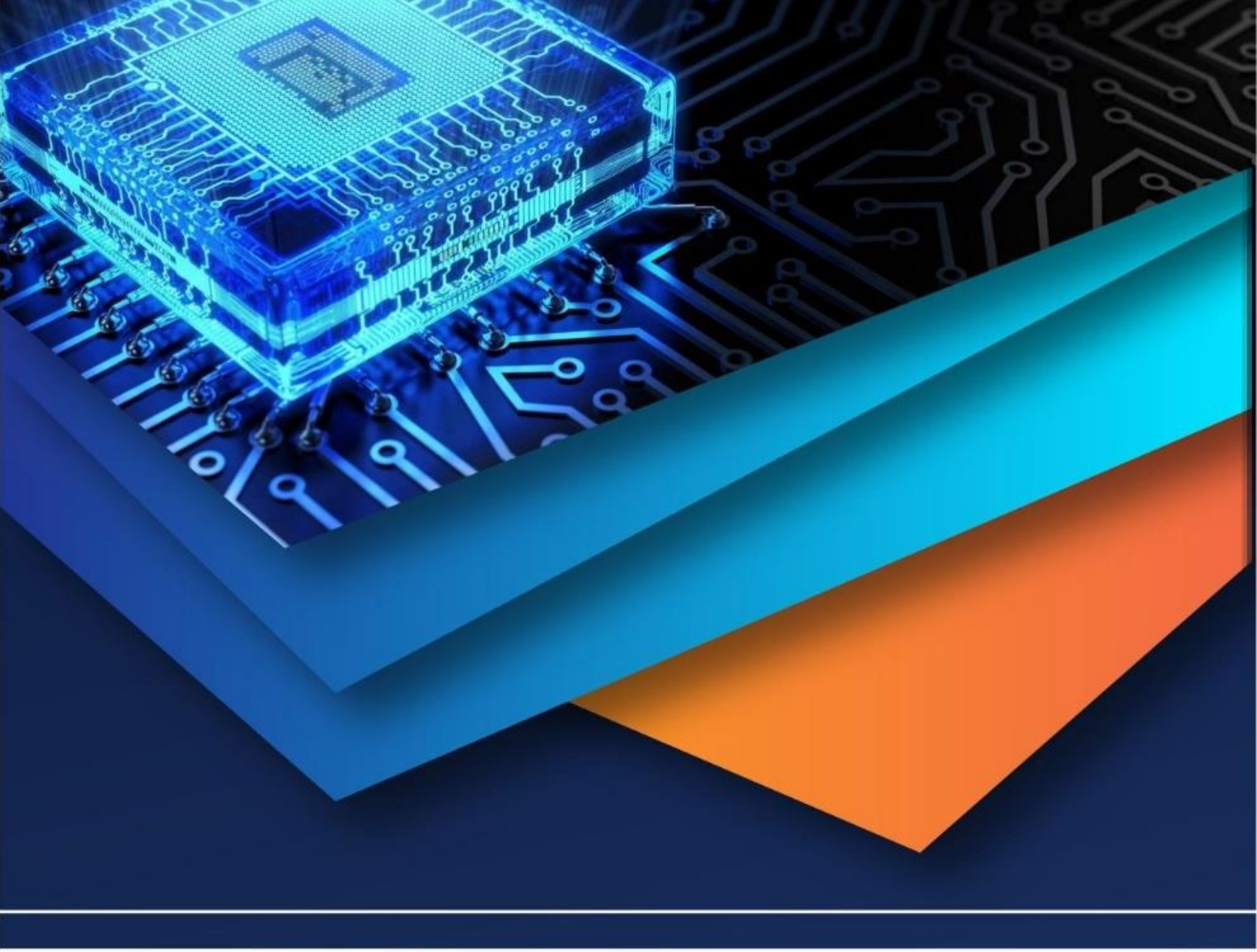
X. CONCLUSION

Women safety applications play an important role in improving personal security in modern society.
The proposed Smart Women Safety Application provides an efficient solution by combining emergency alerts, GPS location tracking, and trusted contact communication.
The system is simple, reliable, and easy to use during emergency situations.
The research demonstrates that smartphone technologies can be effectively used to develop digital safety solutions. With further improvements and additional features, such applications can significantly contribute to improving women safety and reducing emergency response time.

REFERENCES

[1] Research on Android Based Women Safety Applications.
[2] Mobile Emergency Alert Systems for Personal Security.
[3] GPS Based Location Tracking Systems.
[4] Android Development Documentation.
[5] Research Papers on Mobile Safety Applications.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)