

Emergency Contact App for Road Accident Safety

A Mini-Project Presentation

Team Members: [AbhayVishwakarma/2401010076]

[Bhavishya Sain/2401010111]

[Shubham Yadav/ 2401010073]

[Naman Yadav/ 2401010112]

Institution: KR Mangalam University



The Problem: Road Accidents & Delayed Response

Victims Unable to Call

Every year, [Specific statistic]% of road accident victims can't call for help.

Rural Incidence

60% of accidents occur in rural areas with delayed assistance.

The Golden Hour

Critical first hour for treatment greatly impacts survival rates.

Data Source

Based on National Highway Traffic Safety Administration (NHTSA) data.



Our Solution: The "Guardian Angel" App

Automatic Detection

Triggered by sudden deceleration and impact detected by phone sensors.

Immediate Notification

Sends SMS and location to pre-defined emergency contacts instantly.

Reduce Response Time

Aims to improve victim outcomes by speeding emergency contact alerts.

Key Features: Saving Precious Time



Accident Detection

Uses accelerometer and gyroscope data for accurate detection.



Emergency Notification

SMS with GPS location sent immediately to contacts.



False Alarm Prevention

User can cancel notification within a brief window.



Battery Efficient

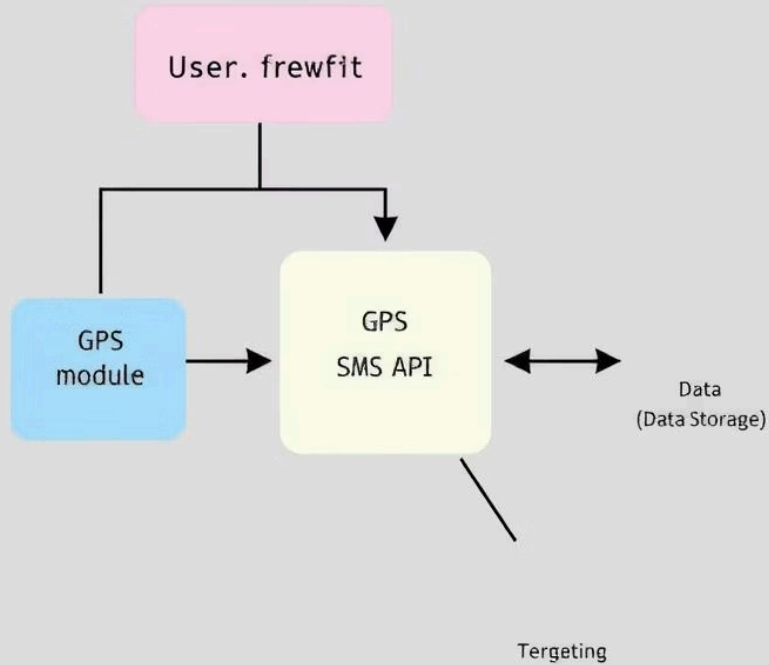
Minimal background processing optimized for power saving.

Emergency Contact App

Add Contact

Saved Contacts

Send Alert Message



Technology Stack: Built for Reliability



Android/iOS Native

Direct hardware access for sensor data accuracy.



GPS Tracking

Ensures precise location of accident.



SMS API

Uses services like Twilio for reliable messaging.



How It Works: Seamless Operation

1

User Setup

Enter emergency contacts and personal information.

2

Background Monitoring

App continuously monitors sensor data for accidents.

3

Accident Detection

Countdown timer allows cancellation if falsely triggered.

4

Notification Sent

If uncanceled, SMS with location and message is sent.



Testing & Results: Real-World Simulations

[Specific...]

Detection Accuracy

Percentage accuracy in identifying accidents.

[Seconds]

Notification Time

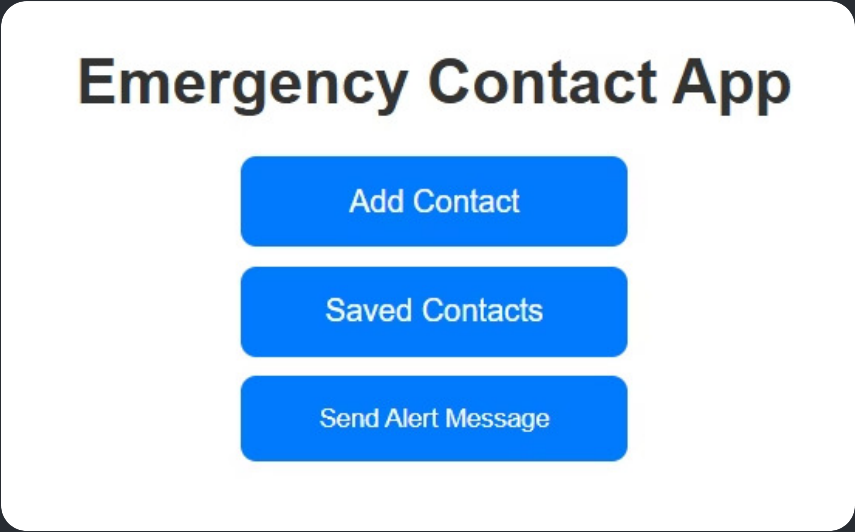
Time taken to send alert after detection.

90%

User Satisfaction

Feedback from sample users after testing.

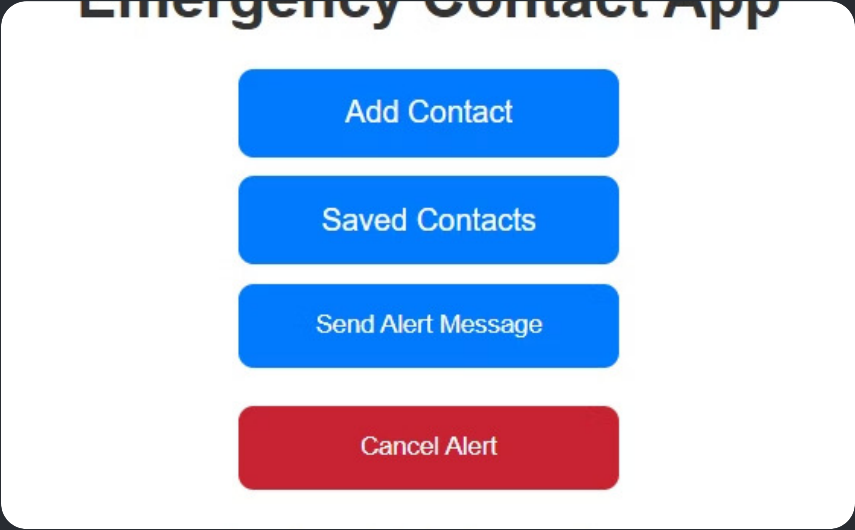
Visual Prototype: App Interface Demo



Contact List
Simple and customizable for multiple contacts.



Settings
User-friendly controls for preferences.



Accident Alert
Clear alert with option to cancel notification.

Future Development: Enhancing Safety

Emergency Services Integration

Connect directly to 911 and local authorities.

Voice Activation & SOS

Hands-free activation and emergency voice commands.

Accident Hotspot Mapping

Data analytics to help improve road safety.

Fall Detection

Algorithm enhancements to include fall scenarios.

Conclusion: A Lifesaving Innovation

☐ Reduce Response Times

"Guardian Angel" speeds emergency notifications effectively.

☐ Save Lives

Potential to improve survival and recovery outcomes.

☐ Next Steps

Expand testing, seek funding, and public launch planned.

☐ Q&A

Address all questions from the audience.

