

# RAKSHA : A Smart Human Rescue Android System for Real-Time Accident Reporting and Emergency Response

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**Abstract:** *This presents an Android-based smartphone application designed to automatically detect vehicular accidents and initiate emergency response actions. Upon detecting a crash, the system instantly retrieves the user's GPS location and activates an alarm interface. With a single tap, users can request emergency assistance, after which the application automatically calls the local emergency number and sends SMS alerts to predefined contacts. These alerts include crucial details such as location coordinates, number of passengers, and crash characteristics. The primary challenges in developing this system include achieving high crash detection accuracy under varying conditions while minimizing false positives, integrating with onboard vehicle systems for enhanced data collection, ensuring data privacy and cybersecurity, and maintaining minimal battery consumption. If these challenges are effectively addressed, the proposed automated crash detection and emergency alert system can significantly reduce emergency response time, enhance road safety, and serve as a low-cost, scalable solution capable of saving lives worldwide.*

**Keywords:** Android application, accident detection, emergency alert system, GPS tracking, crash detection, road safety, real-time monitoring

