



HackOrbit 2025

VIBE CODERS





THEME AND PROBLEM STATEMENT

Problem statement: REAL-TIME DANGER DETECTION FOR SAFETY OF WOMEN TRAVELERS

Domain: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



Unawareness of Unsafe Areas

Women often unknowingly enter high-risk zones due to lack of real-time safety info



Underreporting of Harassment

Many women avoid reporting due to fear, shame, or lengthy processes

Delayed Response in Emergencies

Victims may not be able to call for help quickly or clearly in crisis situations

Psychological Impact of Fear and Insecurity

Constant fear of crime leads to chronic stress, anxiety, and even trauma for women



Language and Accessibility Barrier

Many women, especially in rural areas, struggle to understand or interact with tech apps



PROPOSED SOLUTIONS



- Faster Response in Emergencies**
- AI-powered panic trigger
 - Sends live location
 - Sends Notification



- Reduced Psychological Impact of Fear and Insecurity**
- Control and empowerment
 - Access of a tool for guidance
 - Reduces anxiety



Increased Awareness of Unsafe Areas

- Heatmaps based on crime data
- User reports
- Time-specific patterns



Increased Reporting of Harassment

- Reporting system using NLP
- Categorize and analyze incidents
- Helps build safer communities



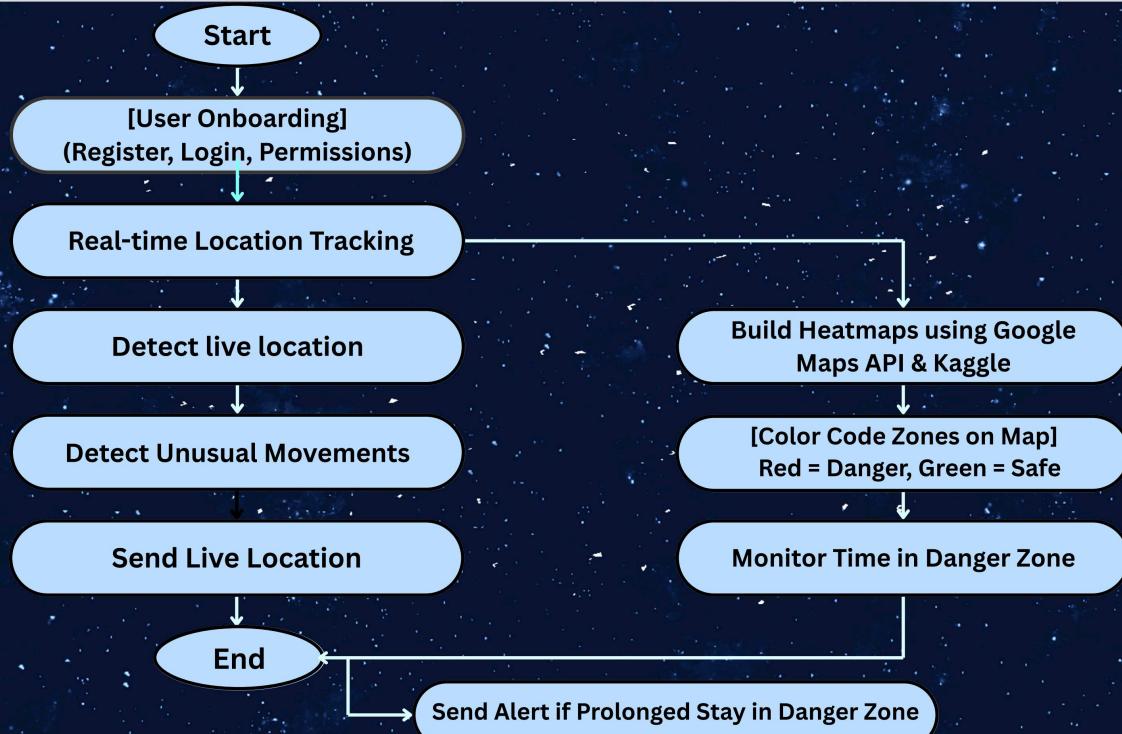
Voice Enabled Interface

- Voice-based commands
- Text-to-speech functionality
- Uses SpeechRecognition, or IBM Watson.



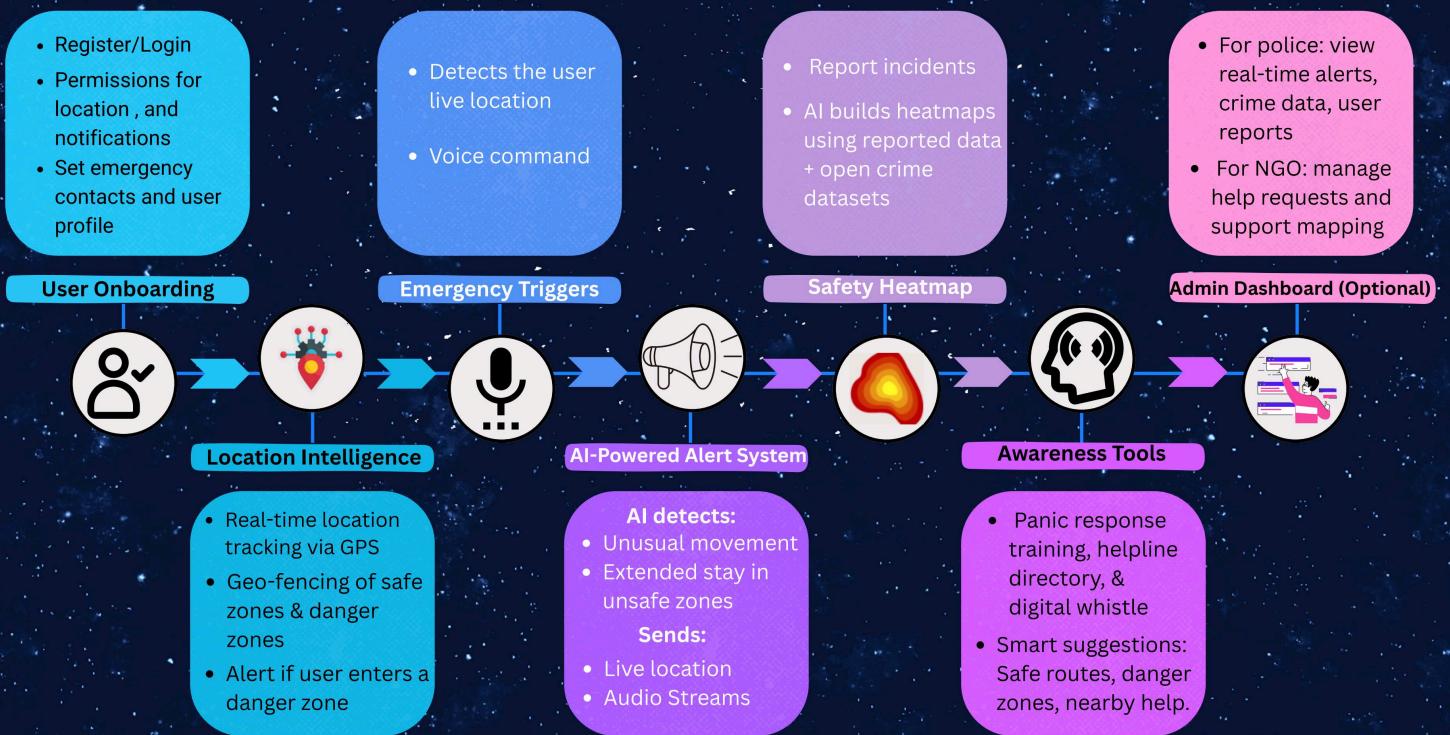


FLOWCHART





FLOWCHART





FEATURES AND NOVELTY

CROWD-DENSITY DATA

- Google Places API
- Device Density (Bluetooth/Wi-Fi Scanning - Advanced)

TIME-BASED FEATURES

- System dynamically incorporates the time of day, day of the week & even specific dates*



GEOLOCATION DATA

- GPS (Global Positioning System)
- Assisted GPS (A-GPS) & Cell-ID/Wi-Fi Triangulation

CRIME DATA SOURCES

- Public Government Datasets (e.g., NCRB India, Kaggle)

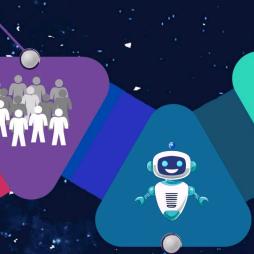


MODEL SELECTION

- Random Forest OR
- Logistic Regression.

TRAINING & EVALUATION

- trained on historical and crowdsourced data, with continuous retraining



BACKEND

- Node.js • Flask
- Firebase • MongoDB

API MANAGEMENT

- Google Maps API
- Twilio API



SECURITY AND PRIVACY

- Data Encryption
- Anonymization
- Consent
- Regular Security Audits



FRONTEND

- React.js

UI/UX Design Principles

- Clean,
- Intuitive, and
- Informative



NOVELTY

- Real-Time, Location-Aware Alerts
- User Empowerment and Community Feedback
- Scalability and Real-World Applicability



DRAWBACKS AND SHOWSTOPPERS

Problem: Lack of reliable, real-time crime data (especially city-specific like Gwalior).

Mitigation: Use crowd-sourced data, past reports, or simulate datasets for demo.

Problem: AI models may wrongly flag safe zones as unsafe, or vice versa.

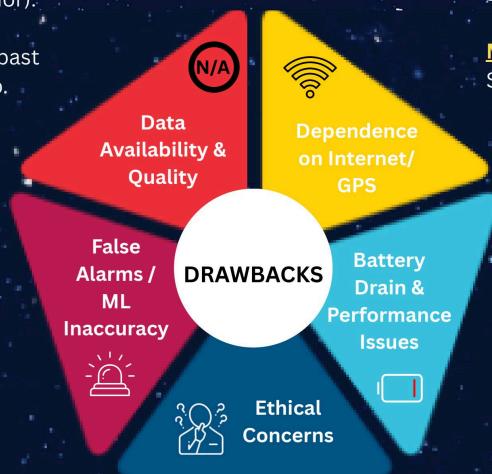
Mitigation: Use hybrid models (AI + user feedback loop) to improve accuracy.

Problem: In low-network or GPS-disabled areas, app features like panic alerts may fail.

Mitigation: Add offline fallback options like SMS-based SOS or Bluetooth beacons.

Problem: Continuous GPS tracking, AI-based background monitoring, and real-time updates can drain battery and slow down older devices.

Mitigation: Use low-power location modes (e.g., fused location provider API), Enable battery optimization settings.



Problem: Misuse of location tracking or fake reports could lead to legal/ethical issues.

Mitigation: Implement strict verification & moderation using AI + human review to detect fake reports, prevent misuse, and ensure ethical handling of sensitive data.



TEAM NAME



Team Name: VIBE CODERS

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Data Analysis



Vibe Coder

Thank You
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