SafePath AI: Project Overview

Project Summary

SafePath AI is a real-time gender-safety navigation platform that empowers women to move through urban environments with greater confidence and security. Unlike traditional safety apps that focus primarily on emergency responses, SafePath AI takes a proactive approach by predicting and preventing unsafe situations before they occur.

Core Value Proposition

SafePath AI integrates diverse data streams—crime statistics, urban infrastructure data, and crowdsourced safety sentiment—to create a comprehensive safety intelligence system. The platform delivers personalized route recommendations, real-time safety alerts, and community-based safety solutions through an intuitive chatbot interface.

Key Features

Dynamic Safety Heatmaps

The platform generates real-time safety heatmaps by combining data from multiple sources:

- Crime data from police APIs
- Urban infrastructure information (streetlight density, CCTV coverage)
- Anonymous user safety ratings and reports

Users receive route recommendations with safety scores and specific insights about potential hazards.

Predictive Harassment Alerts

Our machine learning system anticipates high-risk scenarios by analyzing:

- Historical incident patterns by time and location
- Crowd density information from events and social media

- Environmental factors like weather that impact street population
- Real-time transit occupancy data

Public Transport Safety Audit

The platform provides detailed safety information about public transportation options:

- Occupancy levels and gender distribution in vehicles
- Recommendations for optimal seating positions
- User-generated safety ratings for specific routes and vehicles

SafeZone Community Network

SafePath AI facilitates community-based safety through:

- Anonymous matching of users traveling similar routes
- Coordination of group walks via the chatbot
- Partnerships with businesses to create safe meeting points

Technical Implementation

- Risk prediction models built on XGBoost trained with historical and real-time data
- Natural language processing to interpret and classify user reports and sentiment
- Integration with city infrastructure, transit, and mobility APIs
- Anonymous crowdsourcing mechanisms through intuitive chat interfaces

Impact & Applications

SafePath AI addresses the critical issue of women's safety in public spaces with a solution that is:

- Preventive rather than reactive
- Community-powered and continuously improving
- Scalable across different urban environments
- Accessible without login requirements
- Valuable for both individual users and urban planners

This platform represents a significant advancement in urban safety technology by combining cutting-edge AI/ML capabilities with community engagement to create safer cities for everyone.