

S.No	Problem Statement ID	Problem Statement Name	Domain
1	CT-DFIR - 01	Crime Hotspot Mapping and Behavioural Analysis System	DFIR

Description :

The project aims to create a user-friendly interface to assist law enforcement by mapping crime hotspots based on real-time FIR (First Information Report) data. It uses color-coded visualizations to highlight areas with high crime rates. It can filter these zones by various parameters like type of crime, time, and season. Additionally, the system extends to behavioral analysis of criminals and predictive insights, such as seasonal trends in crime patterns. The tool will also help in generating optimized patrol routes.

Objectives :

1. Hotspot Mapping :

- Generate crime maps highlighting zones with frequent criminal activities.
- Classify hotspots by crime categories such as theft, assault, or drug-related crimes.

2. Behavioral Analysis :

- Analyze patterns of criminal behavior (e.g., specific times or seasons when crimes occur).
- Predict future crime trends based on factors like societal conditions or historical data.

3. Automatic Patrol Planning :

- Suggest optimal patrol routes for police based on seasonal trends and hotspots.
- Support proactive deployment of forces to sensitive areas.

4. Accident-Prone Area Identification :

- Data from iRAD (Integrated Road Accident Database) and CCTNS (Crime and Criminal Tracking Network & Systems) can be used to pinpoint accident hotspots.

5. Legal Classification :

- Categorize crime data using relevant sections from laws like the Indian Penal Code, NDPS Act, Arms Act, etc., for better organization and analysis.

Expectations :

- **For Police :**
 - A simple and effective tool to monitor, predict, and manage crime.
 - Insights to allocate resources based on the severity and frequency of crime.
- **For Developers :**
 - Work with dummy/sample FIR data to build and test the system.
 - Implement color-coded visualizations for easy identification of crime hotspots.
 - Develop algorithms for behavioral and trend analysis.
- **For End Users :**
 - Intuitive interface with clear visuals and actionable insights.
 - Automated reports and patrol recommendations.

Expected Results :

1. **Hotspot Visualization :**
 - Dynamic crime maps showing high-risk areas in real-time.
2. **Proactive Policing :**
 - Data-driven patrol routes for efficient resource allocation.
3. **Predictive Analysis :**
 - Crime trend predictions based on historical and societal factors.
4. **Enhanced Safety Measures :**
 - Strengthened safety for women through strategic patrolling.
 - Identification of accident-prone zones to minimize road mishaps.
5. **Actionable Insights :**
 - Police can quickly respond to crime trends and allocate resources effectively.