CrimeLens

Crime Pattern Prediction and Visualization Platform

Guide :

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INTRODUCTION

Criminal activities remain a significant barrier to public safety and urban development. Traditional crime analysis methods are manual, error-prone, and lack predictive capabilities, making it difficult for law enforcement to proactively identify high-risk areas or respond effectively. There is a pressing need for a data-driven solution that can detect crime hotspots, analyze patterns over time, and forecast future incidents to support smarter, faster crime prevention efforts.

Problem Statement

Existing crime monitoring systems lack real-time hotspot detection, predictive analysis, and interactive visualization. This limits law enforcement's ability to identify critical zones and forecast future incidents accurately, leading to delayed or inefficient response strategies.

Objective

- The aim of the CrimeLens project is to develop a smart, data-driven platform that helps identify, analyze, and predict crime patterns using machine learning and geospatial techniques.

- It seeks to support law enforcement and public safety efforts by transforming raw crime data into actionable insights through clustering, forecasting, and interactive visualization.

- The project aims to provide a user-friendly dashboard for real-time crime data analysis, hotspot detection, and trend forecasting to support effective public safety planning

Who Will Use CrimeLens?

- Law Enforcement Agencies
- City Planners & Government Officials
- Researchers & Analysts
- Public Safety NGOs & Journalists

How Is It Currently Done?

- Based on manual reports, spreadsheets, and NCRB PDFs
- Reactive – crime is analyzed after incidents occur
- No interactive visualization or prediction tools

Base Paper

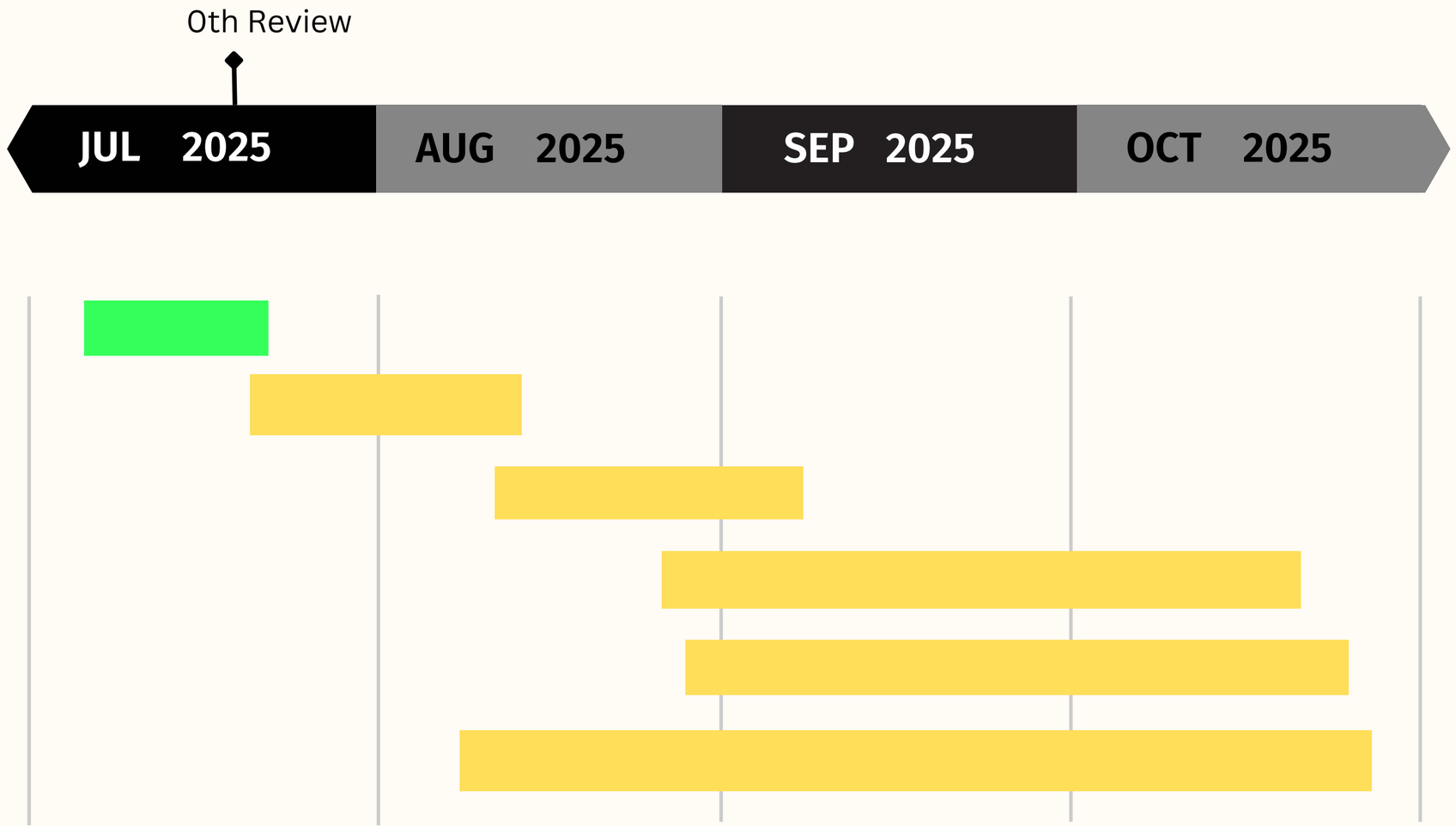
- **Multi-density crime predictor: an approach to forecast criminal activities in multi-density crime hotspots**

  https://doi.org/10.1186/s40537-024-00935-4

Completed

Pending

PROJECT PHASE - I



Conclusion

We plan to build CrimeLens by collecting real crime data, applying machine learning and geospatial methods, and developing an interactive platform. Our goal is to create a working system that can identify crime patterns and support better public safety decisions.