INSIGHTS PREDICTION THROUGH EXPLORATORY DATA ANALYSIS (CRIME DATA ANALYSIS)

A PROJECT REPORT

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IN

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Department of Computer Science & Engineering

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, AB ROAD, RAGHOGARH, DT. GUNA-473226 MP, INDIA

Declaration by the Student

I hereby declare that the work reported in the B. Tech. the project entitled **"Insights Prediction through Exploratory Data Analysis (Crime Data Analysis)"**, in partial fulfillment for the award of the degree of Bachelor in Technology in Computer Science & Engineering submitted at Jaypee University of Engineering and Technology, Guna, as per best of my knowledge and belief there is no infringement of the intellectual property right and copyright. In case of any violation, I will solely be responsible.

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CERTIFICATE

This is to certify that the work titled **"Insights Prediction through Exploratory Data Analysis (Crime Data Analysis)"** submitted by **"Devanshi Mathan (221B142), Lakshya Jha (221B218), Yashasvi Grover (221B460)**" fulfillment for the award of degree of Bachelors in Technology in Computer Science & Engineering of Jaypee University of Engineering & Technology, Guna has been carried out under my supervision. As per best of my knowledge and belief there is no infringement of intellectual property right and copyright. Also, this work has not been submitted partially or wholly to any other University or Institute for the award of this or any other degree or diploma. In case of any violation concern student will solely be responsible.

Signature of Supervisor

Dr. Gaurav Saxena
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SUMMARY

Project Objective:

The "Insights Prediction through Exploratory Data Analysis (Crime Data Analysis)" project aims to provide comprehensive insights into crime patterns and trends by utilizing advanced data analysis and machine learning techniques. This project focuses on leveraging diverse crime datasets to identify patterns, hotspots, correlations, and fluctuations in crime frequency, enabling better understanding and support for public safety strategies and crime prevention initiatives.

Key Achievements:

The project successfully employed statistical methods and data visualization techniques to uncover complex crime patterns, including temporal, spatial, and demographic dimensions. By analyzing these facets, it produced valuable insights that inform policy-making, enhance law enforcement strategies, and aid in effective resource allocation. Through systematic exploration, it transcends basic statistics to deliver actionable insights into crime trends and their underlying factors.

Conclusion:

While the project demonstrates the potential of data-driven crime analysis to contribute to community safety and urban planning, challenges such as data quality, and model interpretability were recognized. This initiative advances crime analysis methodologies, contributing meaningfully to a data-informed approach for addressing crime.

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