



Department of Information Science & Engineering

Mini Project Synopsis

Title: Mood in Motion: Urban vs Rural Crime Patterns in India: A Data Analysis Using Power BI

Introduction:

The Urban vs Rural Crime Patterns in India project is designed to analyze and compare the distribution and types of crimes reported in urban and rural regions across India. Using data from the National Crime Records Bureau (NCRB), the study will focus on crime categories such as theft, cybercrime, fraud, assault, dowry-related cases, and land disputes. By leveraging Power BI, the project will create interactive dashboards to visualize differences in crime trends between metropolitan cities and rural districts.

This analysis aims to highlight the variations in crime incidence, identify region-specific issues, and uncover patterns such as the rise of cybercrime in urban centers and the prevalence of violent or land-related disputes in rural areas. The findings will contribute to a deeper understanding of crime trends and support policymakers, law enforcement agencies, and researchers in developing targeted interventions to enhance public safety.

Statement of the problem:

Crimes in India are influenced by social, economic, and demographic factors, which differ significantly between urban and rural regions. While urban areas face challenges such as cybercrime, financial fraud, and property theft, rural districts encounter issues like land disputes, dowry deaths, and violent crimes. Despite the availability of NCRB data, comparative studies focusing on urban versus rural crime trends remain limited.

The lack of visualization and analytical tools in traditional reports makes it difficult to identify meaningful patterns. This project addresses the gap by employing Power BI to create an interactive crime analysis platform, enabling better comparison, identification of hotspots, and actionable insights.

Objectives of the study:

- To classify and compare crime types between urban and rural regions of India.
- To analyze crime rates per one lakh population across different states/districts.
- To identify crime categories more prevalent in metropolitan cities versus rural areas.
- To study year-wise crime trends and emerging issues such as cybercrime.
- To visualize findings using Power BI dashboards for actionable insights.

Statement of Hypothesis:

H_0 (Null Hypothesis): There is no significant difference in the pattern of crimes between urban and rural regions in India.

H_1 (Alternative Hypothesis): There is a significant difference in the pattern of crimes between urban and rural regions in India.

Sources of Data Collection:

The study will utilize two primary sources of data:

- Secondary Data:

National Crime Records Bureau (NCRB) – Crime Statistics, District/State-wise, Crime Head-wise (2001 onwards).
India Data Portal (CSV format).
Census of India for urban vs rural classification.

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