

Crime Dataset Analysis

By Team Ctrl

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Problem Statement & Objectives

Explore crime patterns

Analyze crime data across Indian states and union territories over multiple years to identify trends and patterns.

Data preprocessing

Perform cleaning, standardization, and handling missing values to ensure dataset reliability for meaningful analysis.

Gain insights

Use exploratory data analysis to uncover crime rate trends, highcrime regions, and relationships between crime types.

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Dataset Overview & Preprocessing

Dataset contents

- State/UT names
- Years of recorded data
- Crime types: Murder, Rape, Theft, Assault, Kidnapping

Preprocessing steps

- Dropped columns like "S. No." and "Total Crimes"
- Renamed columns to lowercase, removed spaces
- Handled missing values and verified data types for accuracy



Tools & Technologies Used

Google Colab

Cloud-based Jupyter Notebook for collaborative coding and analysis.

Pandas & NumPy

Efficient data handling, cleaning, and numerical computations in Python.

Matplotlib & Seaborn

Creation of informative bar graphs, count plots, and heatmaps for visualization.

Exploratory Data Analysis Visuals

Year-wise Trends

Bar plots revealed spikes in total crimes in 2006 and 2010, showing significant fluctuations.

State-wise Analysis

States with highest crime rates identified clearly through comparative bar charts.

Crime Type Patterns

Assault and Theft emerged as most frequently reported crimes in count plots.

Correlations

Heatmaps highlighted relationships and co-occurrence among different crime categories.

Key Insights and Findings



Persistent high-crime states

Certain Indian states consistently report higher crime incidents year after year.



Frequent crime types

Assault and Kidnapping dominate in frequency, indicating areas for focused interventions.



Crime correlations

Significant positive correlations identified between specific crime types suggest overlapping causes or clusters.



Overall trend

Crime rates generally exhibit an increasing trend, emphasizing the need for preventive measures.



Team Ctrl Intelligence: Contributions







Isha Singh

Lead scripting of
Python notebook and
managed GitHub
repository uploads

Padam Rathi

Collected and structured the dataset, organized project workflow

Sameer Pawar

Designed
visualizations, created
plots using Matplotlib
and Seaborn



Tanush Kumar

Reviewed and finalized formatting and presentation slide content

Thank You

We appreciate your interest in our Crime Dataset Analysis project. For questions or collaboration inquiries, please reach out to Team Ctrl Intelligence.

Thank You