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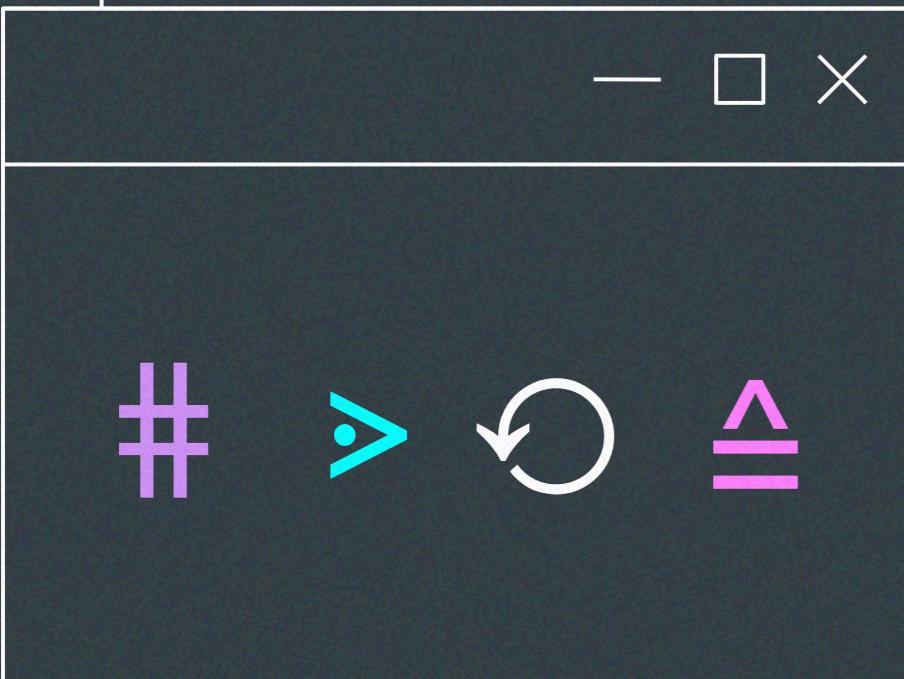
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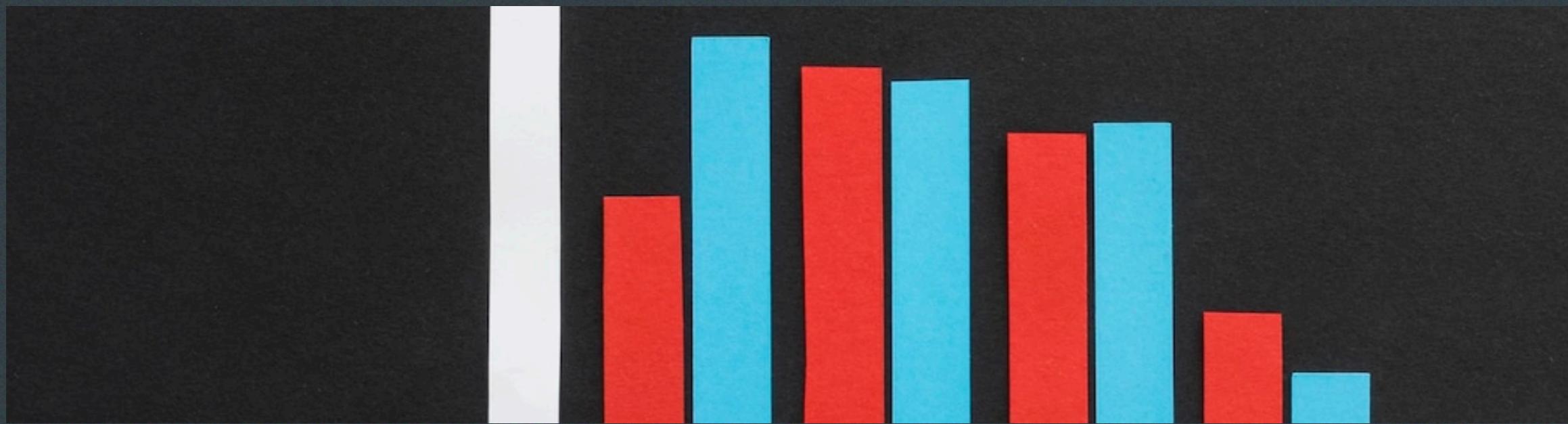
Forecasting Crime: Analyzing Criminal Rates

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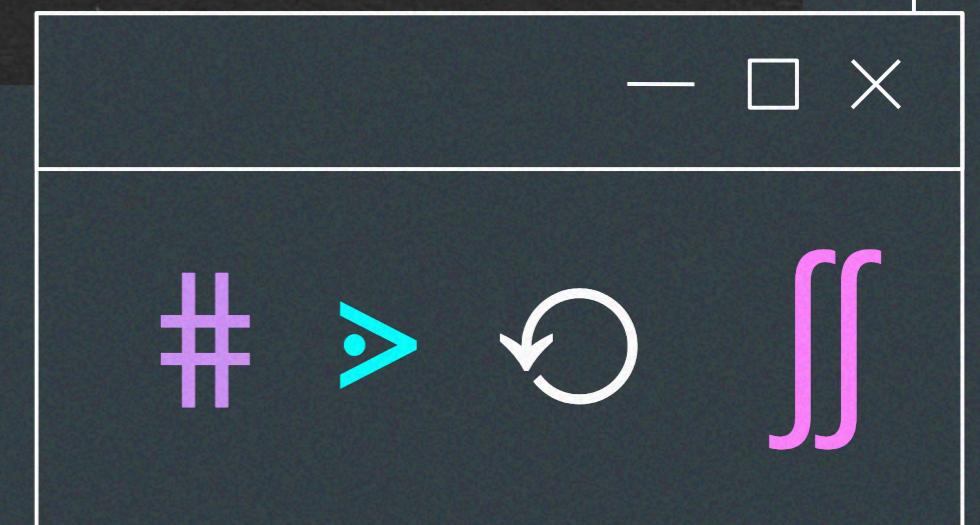
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Introduction

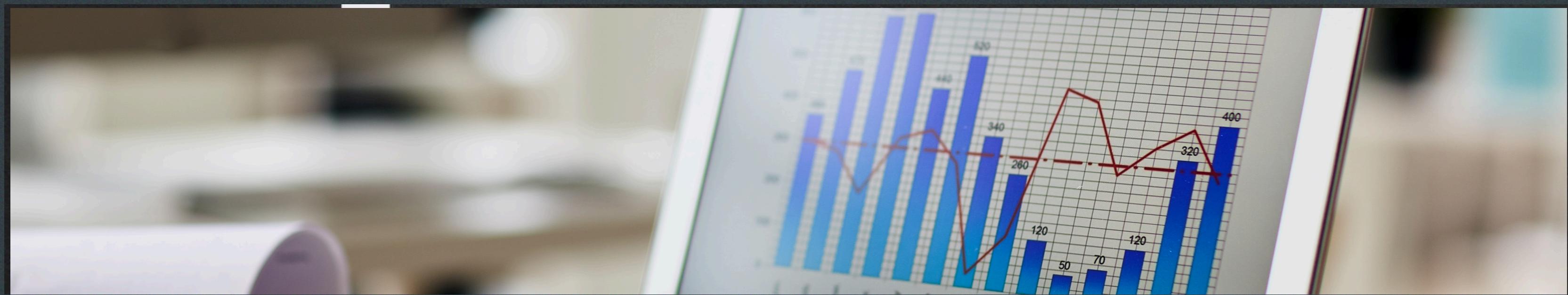
Understanding **crime trends** through data analysis is crucial for **crime prevention** and law enforcement strategies. This presentation will explore the **factors influencing** criminal rates and the **methods for forecasting** future trends.



Crime Data Analysis

Analyzing historical crime data provides valuable insights into **spatial patterns**, **temporal trends**, and **hotspot areas**. Understanding these patterns can help in developing effective **crime prevention strategies**.





DATA SOURCES

State-wise crime in India having the following columns:

State/UT

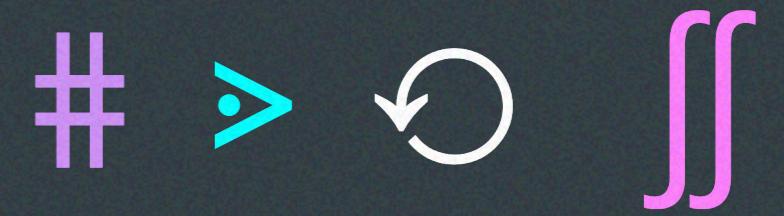
Year

Kidnapping

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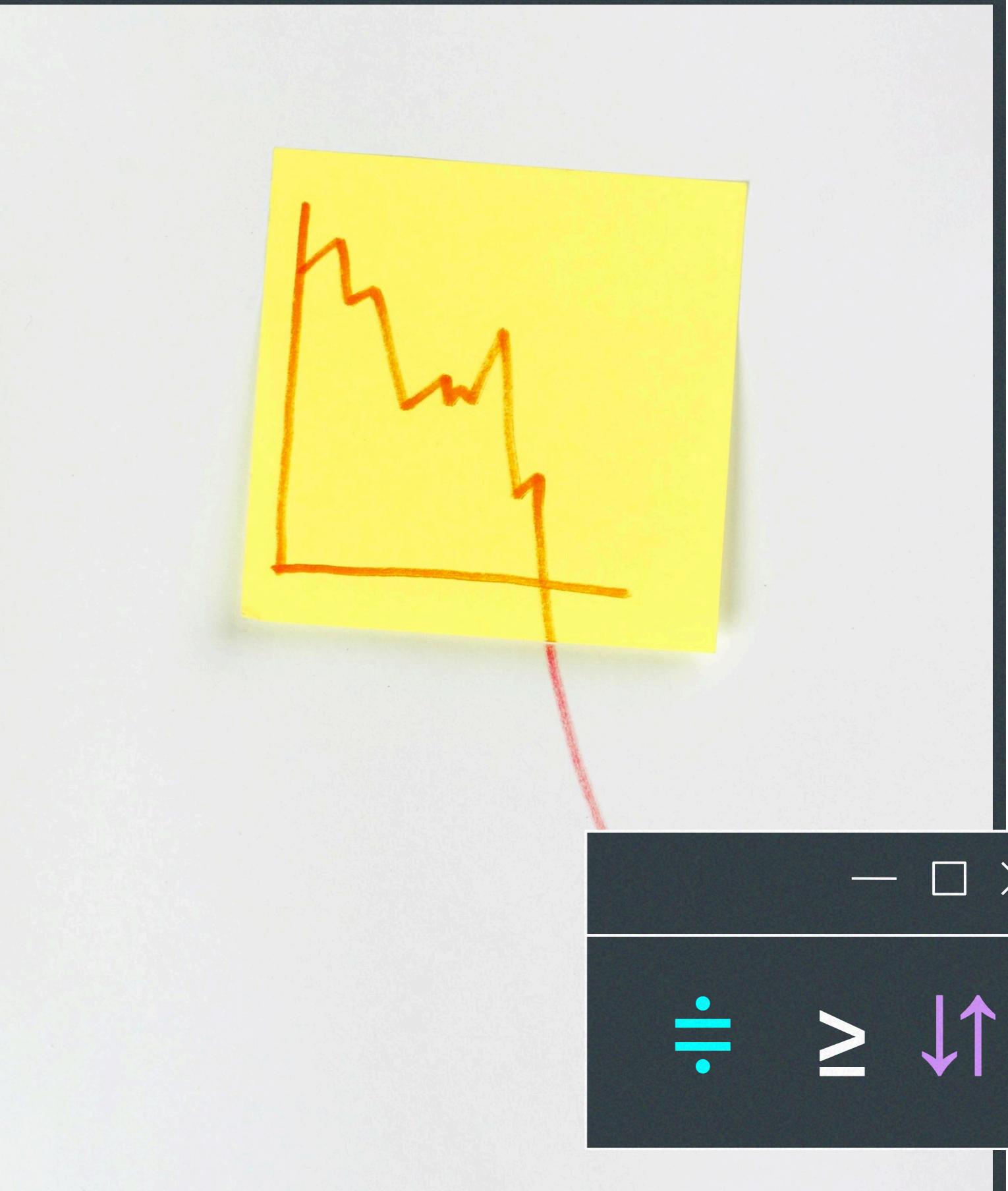
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Other crimes



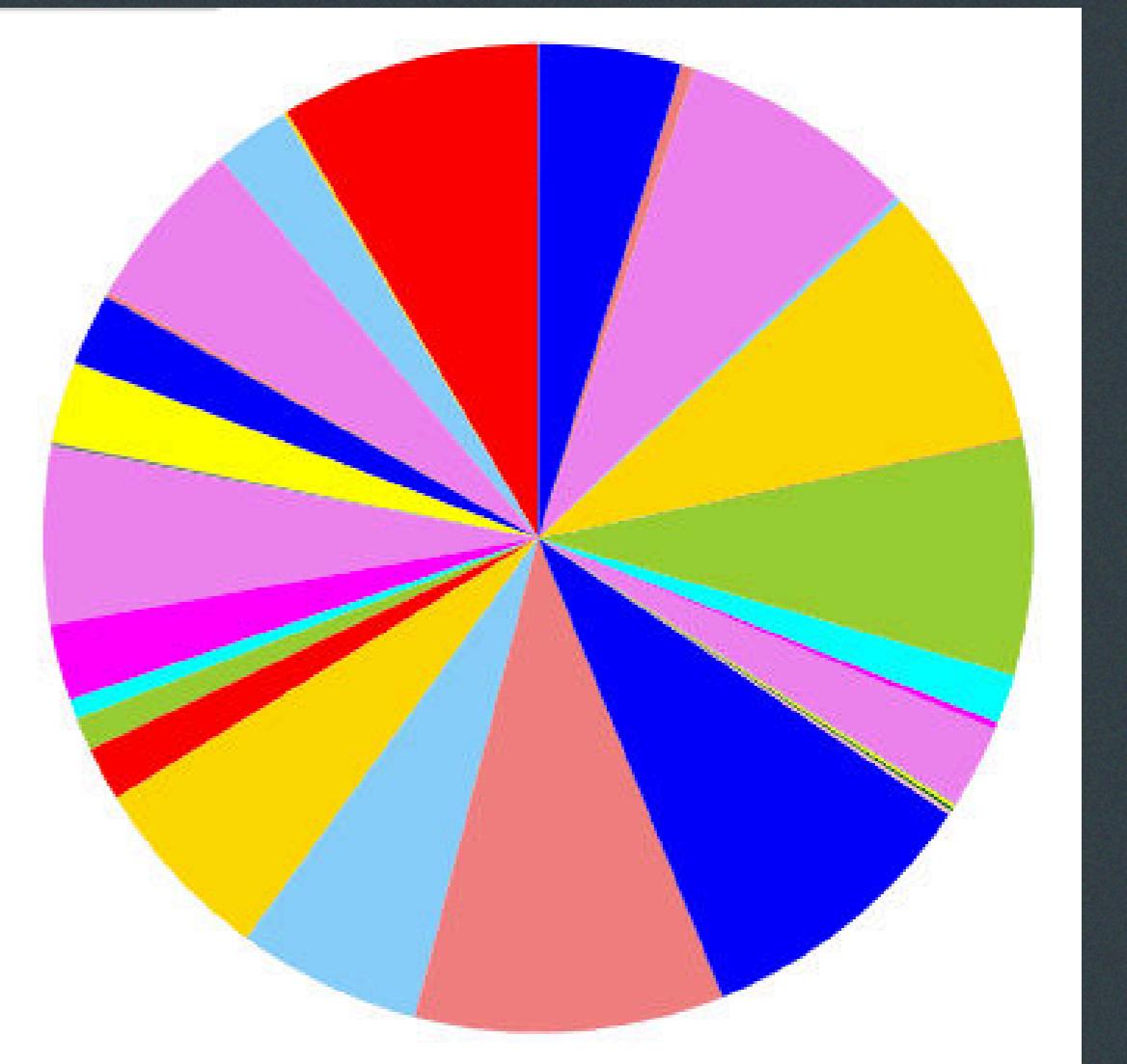
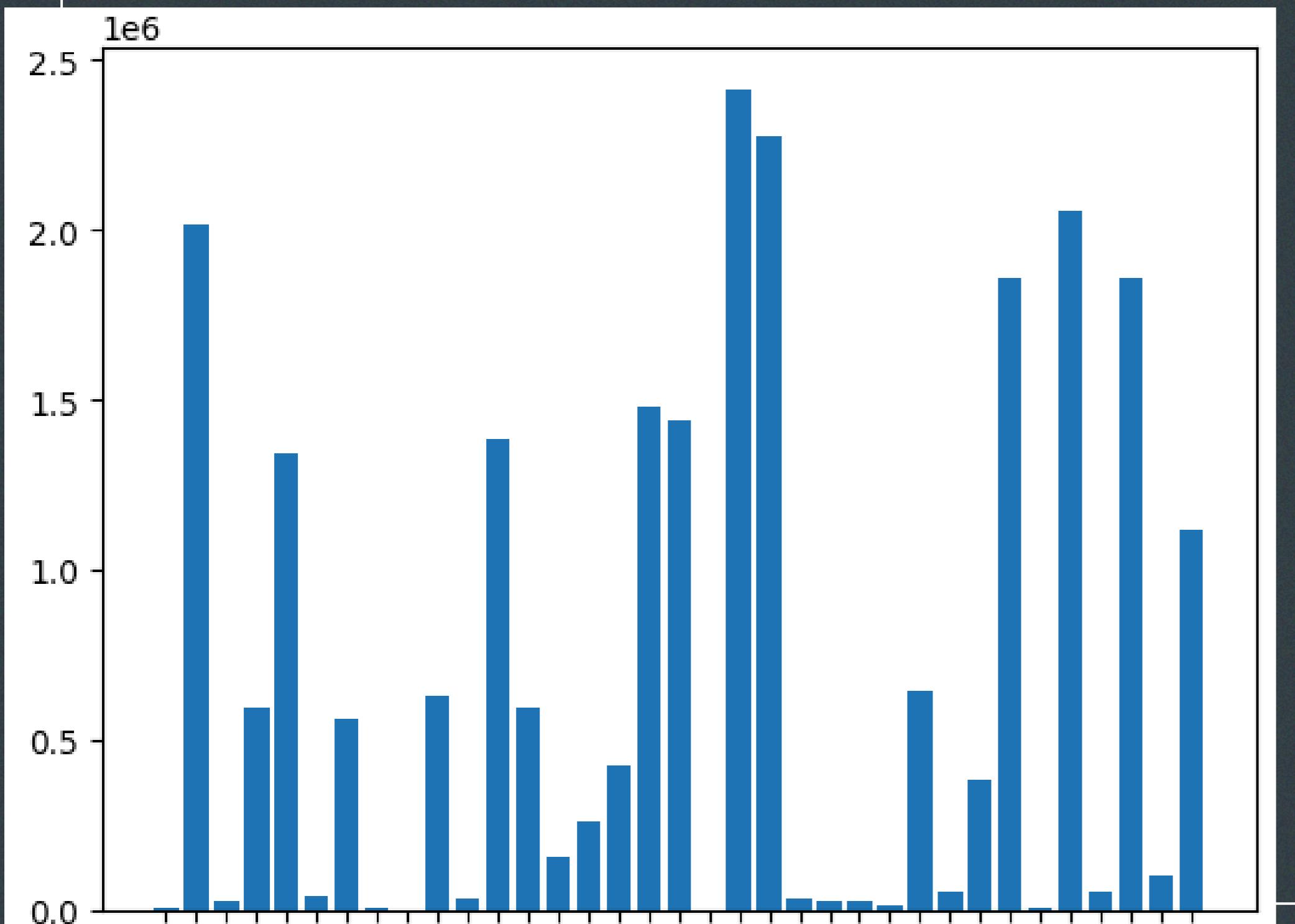
Methodology

- READING DATASET
- MANAGING MISSING DATA - REPLACING MISSING ENTRIES WITH MEAN
- ONE HOT ENCODING ON STATES
- CLUSTERING TO FIND OPTIMAL NUMBER OF CLUSTERS
- FEATURE SCALING
- KNN MODEL
- LOGISTIC REGRESSION
- RANDOM FOREST
- DECISION TREE
- PLOT GRAPHS



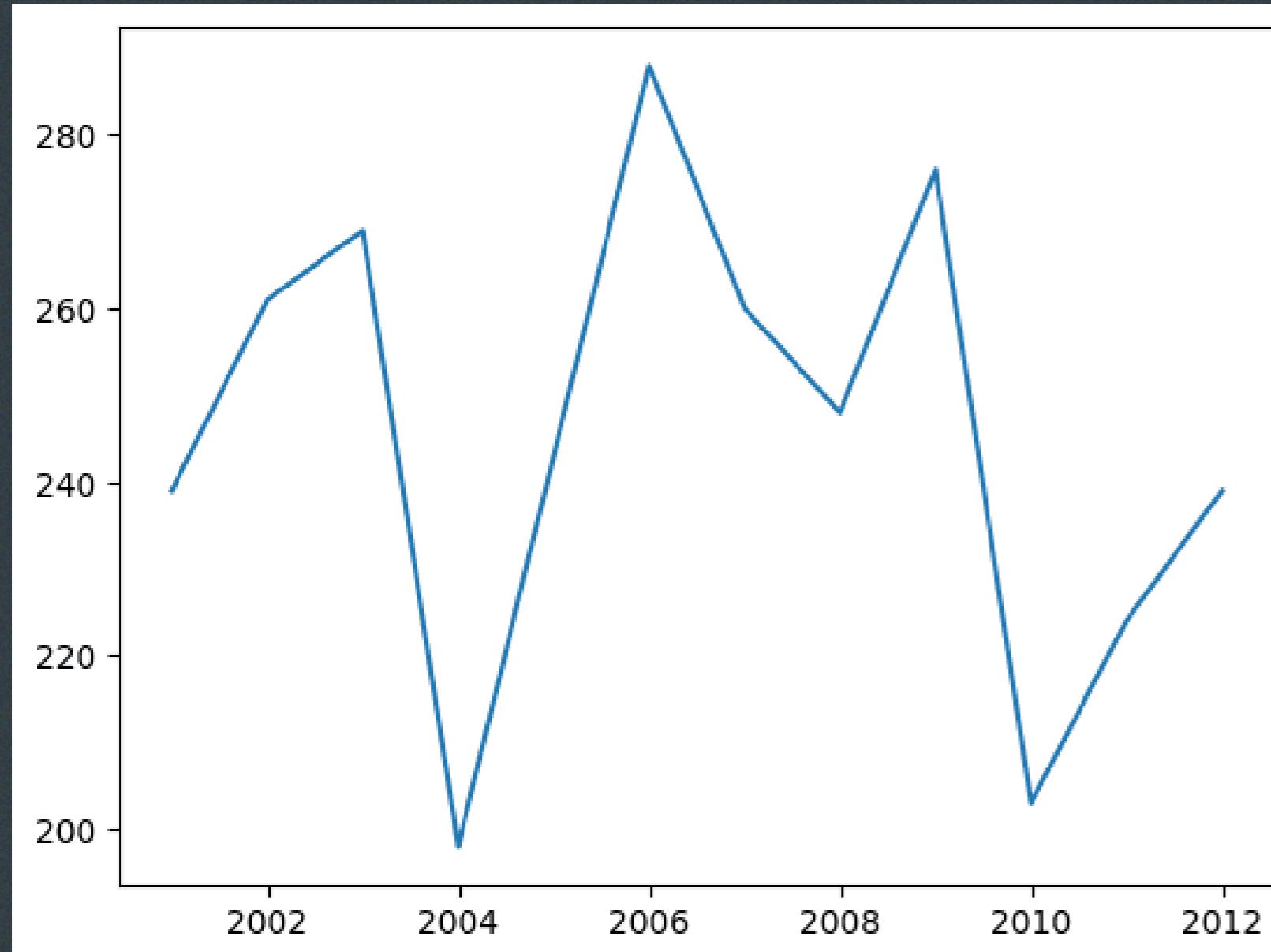
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INFERENCES

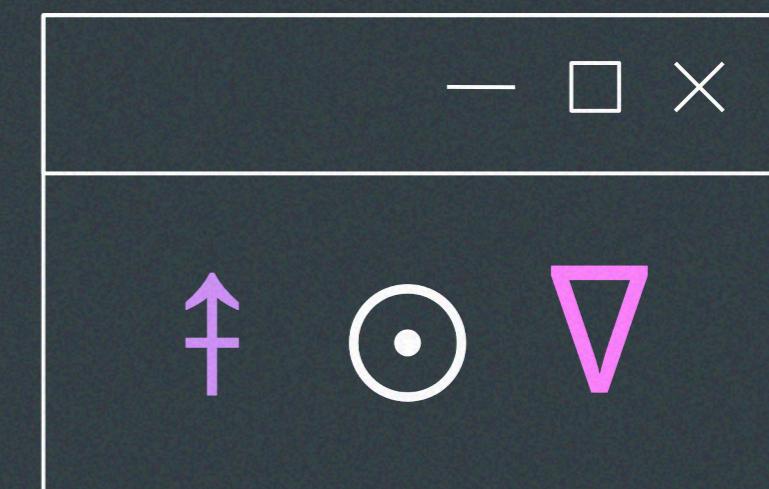


STATE-WISE CRIME RATE

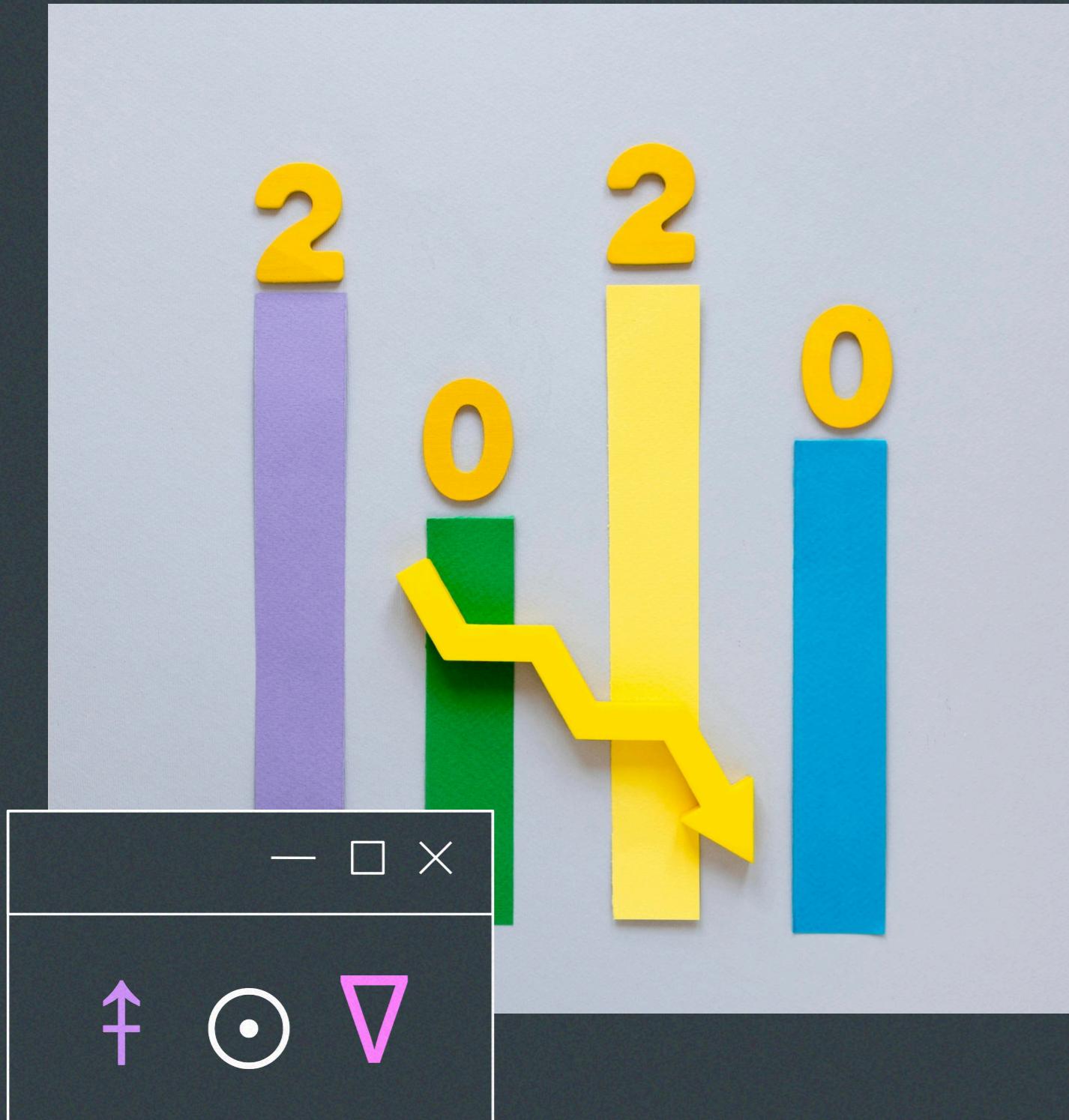
Crime Forecasting Applications



Forecasting crime trends can have practical applications in **resource allocation**, **patrol scheduling**, and **crime prevention programs**. Accurate forecasting can lead to more efficient law enforcement efforts.



Trends & Patterns



Examining **trends and patterns** in criminal behavior unveils fluctuations in crime rates over time. Understanding seasonal variations and long-term trends is crucial for implementing effective crime prevention strategies and resource allocation.

Conclusion

Analyzing criminal rates and forecasting future trends are crucial for **developing proactive law enforcement strategies** and **ensuring public safety**. By understanding the **factors influencing** criminal rates, law enforcement agencies can work towards **reducing crime** and creating safer communities.

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Thanks!

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