

ANALYTICAL DASHBOARD AND ANALYSIS



Course Name: Regression & Time Series Models

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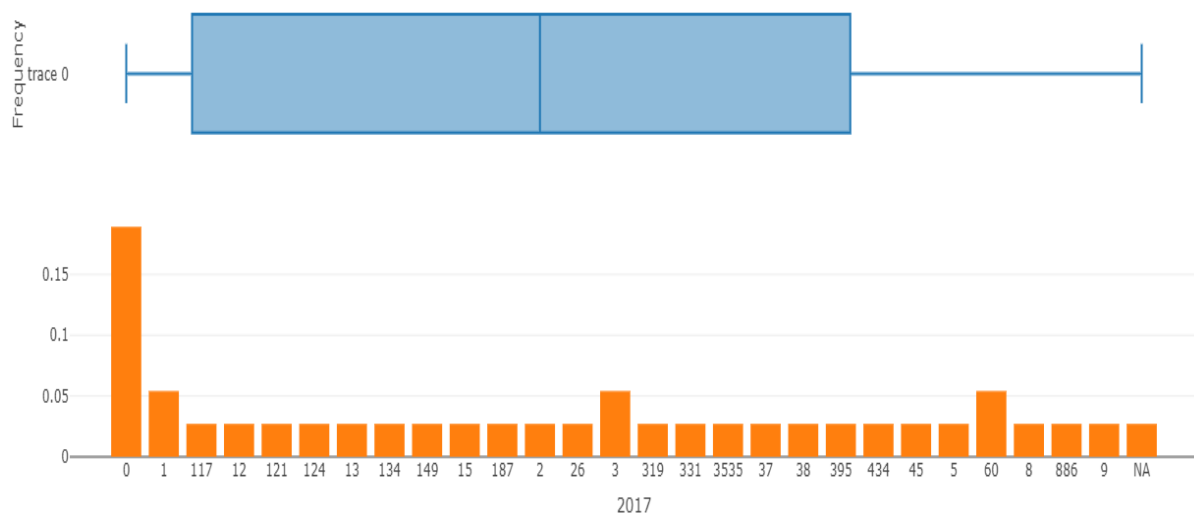
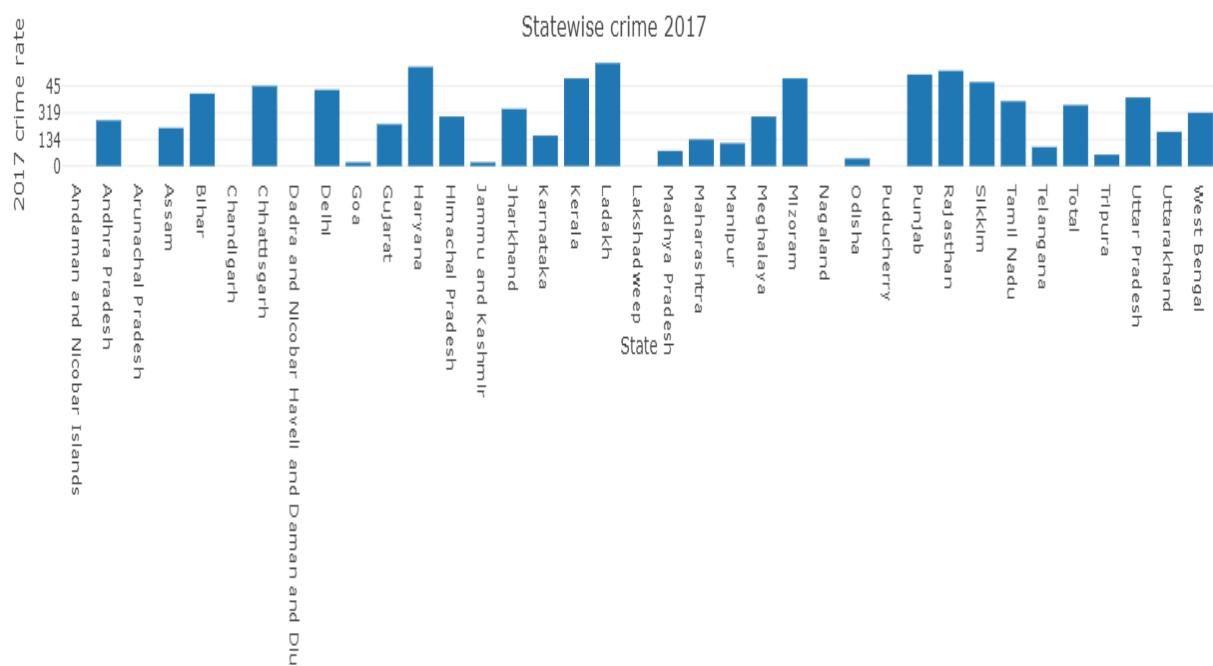
Indian Institute of Foreign Trade, New Delhi

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ANALYTICAL DASHBOARD ON STATE WISE DATA OF CHILD TRAFFICING

Introduction: This analytical report presents an overview of crime data across various states for the years 2017 to 2021. The dataset provides information on the number of reported crimes, and we will explore key statistical measures for each year.

Descriptive Statistics: The dataset includes 37 states, and the crime data for each state is categorized for the years 2017, 2018, 2019, 2020, and 2021. The summary statistics reveal interesting insights into the distribution of crime rates:



- **2017:**
 - Minimum crime rate: 0.0
 - 25th percentile (1st Qu.): 2.0
 - Median: 13.0
 - Mean: 120.1
 - 75th percentile (3rd Qu.): 65.0
 - Maximum crime rate: 2222.0
- **2018:**
 - Minimum crime rate: 0.0
 - 25th percentile (1st Qu.): 2.0
 - Median: 13.0
 - Mean: 120.1
 - 75th percentile (3rd Qu.): 65.0
 - Maximum crime rate: 2222.0
- **2019:**
 - Minimum crime rate: 0.0
 - 25th percentile (1st Qu.): 2.0
 - Median: 13.0
 - Mean: 120.1
 - 75th percentile (3rd Qu.): 65.0
 - Maximum crime rate: 2222.0
- **2020:**

- Minimum crime rate: 0.0
- 25th percentile (1st Qu.): 2.0
- Median: 13.0
- Mean: 120.1
- 75th percentile (3rd Qu.): 65.0
- Maximum crime rate: 2222.0
- **2021:**
 - Minimum crime rate: 0.0
 - 25th percentile (1st Qu.): 2.0
 - Median: 13.0
 - Mean: 120.1
 - 75th percentile (3rd Qu.): 65.0
 - Maximum crime rate: 2222.0

Trends Over Time: While the summary statistics provide a snapshot, further analysis is required to understand trends over time. Visualization techniques such as line charts or bar plots could effectively illustrate how crime rates have evolved across states from 2017 to 2021.

Recommendations:

- **Identify Outliers:** Investigate states with exceptionally high or low crime rates to understand the underlying factors contributing to these variations.
- **Temporal Patterns:** Explore temporal patterns to identify specific years or periods where crime rates spiked or declined significantly. This could lead to insights into the effectiveness of law enforcement or societal changes.

- **Regional Comparisons:** Compare crime rates across regions to identify states with consistently higher or lower crime rates. Understanding regional variations can guide targeted interventions.

Conclusion: This analytical report provides a preliminary exploration of the state-wise crime data for the years 2017 to 2021. Further in-depth analysis, including the exploration of child trafficking, demographic factors, and additional contextual information, would contribute to a more comprehensive understanding of the patterns observed in the data.