Road Traffic Accident Analysis

COURSE: DATA 200 –
Applied Statistical Analysis

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Introduction

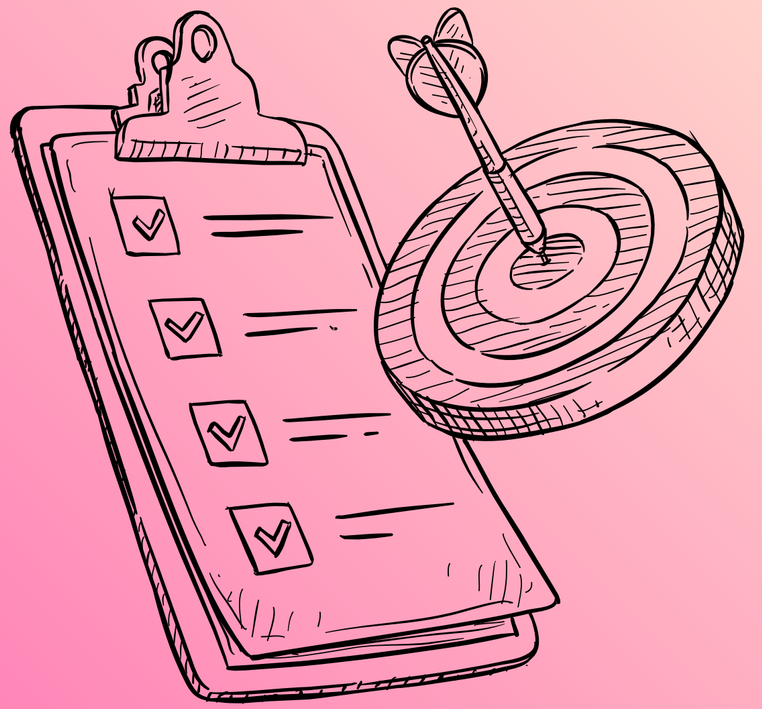
- Road traffic accidents are a major cause of injuries, deaths, and economic loss worldwide.
- Accidents occur due to multiple factors such as time of day, weather conditions, road conditions, and vehicle type.
- Large amounts of road accident data are available, but they need proper analysis to extract useful insights.

Problem Statement

- Road accidents are increasing, but the key contributing factors are not clearly identified.
- Accident data is often underutilized and not properly analyzed.
- There is limited understanding of how factors like time, weather, and road conditions affect accident severity.
- Without data-driven insights, it is difficult to design effective road safety measures.
- There is a need to analyze road accident data to identify high-risk patterns and relationships.

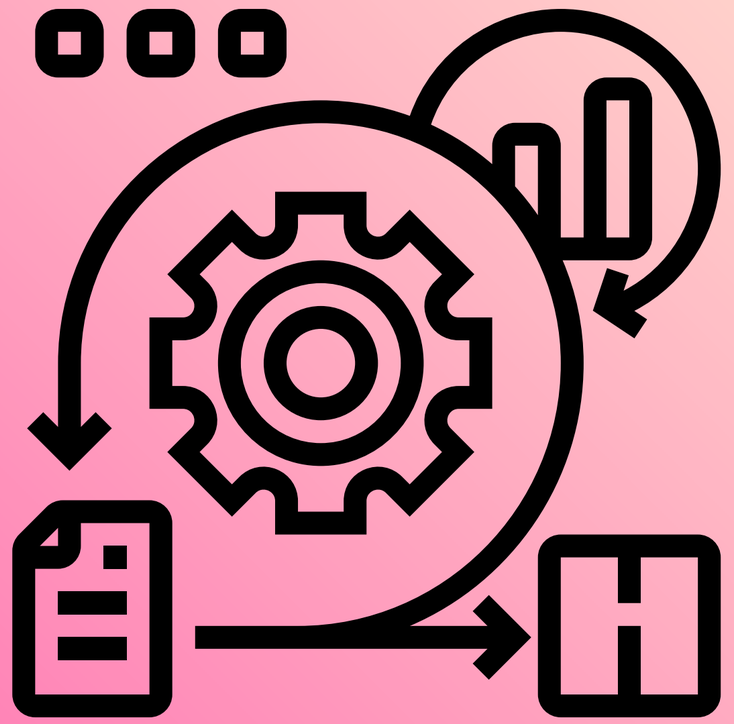
Objectives

- To explore and understand road traffic accident data.
- To identify patterns and trends using descriptive statistics.
- To analyze relationships between variables such as time, weather, and accident severity.
- To prepare clean and structured data for further analysis.



Proposed Methodology

- Handle missing values.
- Remove duplicate records.
- Detect and manage outliers.
- Examine relationships between key variables such as time of day, weather condition, and accident severity.



Expected Outcome

- Clear understanding of accident patterns and trends.
- Identification of high-risk conditions contributing to accidents.
- Visual insights to support road safety decision-making.
- Clean and structured dataset ready for further statistical or predictive analysis.

Deliverable

- EDA summary with descriptive statistics.
- Visualizations (histograms, box plots, scatter plots).
- Key insights from the analysis.

Thank you!