

ROAD ACCIDENT ANALYSIS DASHBOARD – EXCEL PROJECT

Problem Statement

Road accidents are a major public safety concern, leading to significant loss of life, injuries, and economic impact. However, raw accident data is often large, complex, and difficult for decision-makers to interpret effectively.

The objective of this project is to **analyze road accident casualty data** and transform it into a **clear, interactive Excel dashboard** that highlights key patterns related to:

- Accident severity
- Vehicle types involved
- Road types and surface conditions
- Time-based trends (monthly, yearly, day vs night)
- Urban vs rural accident distribution

This dashboard helps **government bodies, transport authorities, and analysts** quickly identify high-risk factors and areas, enabling **data-driven road safety decisions**.

Key Objectives

- Identify **total casualties** and classify them into **Fatal, Serious, and Slight**
- Analyze **casualties by vehicle type**
- Understand accident trends using **CY vs PY comparison**
- Evaluate impact of:
 - Road type
 - Road surface condition
 - Day vs Night
 - Urban vs Rural locations
- Provide **interactive filtering** for deeper analysis

Key Insights Provided

- Majority of casualties are **slight injuries**, but fatal cases require focused intervention
 - **Cars contribute the highest number of casualties**
 - **Single carriageway roads** show the maximum accident count
 - Accidents occur more frequently during **daylight**
 - Urban areas account for a higher share of casualties
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Tools & Techniques Used

- Microsoft Excel
 - Pivot Tables & Pivot Charts
 - Power Query (data cleaning & transformation)
 - Slicers & Timeline filters
 - KPI cards & donut charts
 - Conditional formatting
 - Dashboard design principles
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Dataset

- Road accident casualty dataset
- Time-based and categorical accident data
- Cleaned and structured using Excel