

## **Project Title: Road Accident Analysis using Power BI**

### **Objective:**

To analyze road accident data based on various conditions such as day of the week, weather, road surface, and accident severity, and derive insights to improve road safety using Power BI visualizations and KPIs.

### **Dataset Fields Used:**

- \* Day\_of\_Week
- \* Accident\_Severity
- \* Weather\_Conditions
- \* Road\_Surface\_Conditions
- \* Junction\_Control
- \* Accident\_Index

### **KPI Cards:**

- \* Total Accidents: Count of all accident records.
- \* Day with Highest Accidents: Computed as the day having the maximum grouped count of accidents.
- \* Most Common Weather Condition: Mode of Weather\_Conditions field.

### **Visuals and Their Titles:**

1. Count of Accident\_Severity by Day\_of\_Week and Accident\_Severity
  - Stacked column chart
2. Count of Accident\_Severity by Weather\_Conditions
  - Pie chart
3. Count of Accident\_Index by Day\_of\_Week and Accident\_Severity
  - Line chart
4. Count of Accident\_Index by Junction\_Control and Accident\_Severity
  - Clustered bar chart
5. Count of Accident\_Index by Weather\_Conditions and Accident\_Severity
  - Clustered bar chart
6. Count of Accident\_Index by Road\_Surface\_Conditions and Accident\_Severity
  - Clustered bar chart
7. Table: Weather Condition-wise Count per Day

### **Insights Extracted:**

- \* Friday had the highest number of accidents.
- \* Most accidents occurred in 'Fine no high winds' weather.
- \* Slight accidents are significantly more frequent.
- \* Poor road and complex junction controls increase accident severity.

Conclusion:

The Power BI dashboard highlights key accident patterns, aiding authorities in road safety planning.

Icons and Visuals:

Custom accident-related icons were used to enhance the dashboard’s clarity.

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Date: July 2025

