# Road Accident Dashboard Report

## Problem Statement:

Road accidents are a significant public safety concern, leading to fatalities, injuries, and economic losses. The objective of this dashboard is to analyze accident trends, identify high-risk factors, and suggest actionable strategies for reducing casualties. The dashboard presents data on total accidents, casualties, fatal and serious accidents, weather and road conditions, vehicle types involved, and accident locations.

## Key Insights:

### 1. Total Accidents & Casualties:

- Total accidents recorded: 170,591  
- Total casualties: 230,905  
- Fatal casualties: 4,398  
- Serious casualties: 33,987  
- A 4.30% year-over-year (YOY) increase in total accidents indicates a rising trend in road incidents.

### 2. Accidents by Vehicle Type:

- Motorcycles: 19,630 accidents (highest among vehicle types)  
- Cars: 9,947 accidents  
- Heavy Vehicles (trucks/buses): 193,456 accidents  
- A rise in two-wheeler accidents suggests a need for improved motorbike safety measures.

### 3. Weather & Road Conditions:

- 73.90% of accidents occurred in fine weather, meaning poor weather isn’t the primary cause.  
- 31.90% of accidents happened on wet roads, indicating road surface conditions impact accident rates.  
- 169,943 accidents on single carriageways, showing that road design plays a role in accident severity.

### 4. Geospatial Analysis:

- The accident hotspot map highlights densely affected areas.  
- Identifying accident-prone locations can help implement safety measures like better lighting, traffic enforcement, and speed control.

## Recommendations:

### 1. Traffic Law Enforcement:

- Implement stricter laws for helmet and seatbelt use.  
- Increase traffic police presence at high-risk locations.

### 2. Road Safety Infrastructure:

- Improve road conditions, especially on single carriageways.  
- Install reflective road signs and speed breakers in accident-prone zones.

### 3. Weather Adaptation Strategies:

- Enhance drainage systems to reduce accidents on wet roads.  
- Implement speed control measures during bad weather.

### 4. Public Awareness & Education:

- Conduct road safety awareness programs.  
- Educate motorcyclists and heavy vehicle drivers on safe driving practices.

### 5. Accident Hotspot Management:

- Deploy surveillance cameras in accident-prone areas.  
- Improve emergency response services to reduce fatality rates.

## Conclusion:

The data highlights critical factors influencing road accidents, such as vehicle type, weather conditions, and road surfaces. By enforcing stricter traffic laws, enhancing road safety infrastructure, and increasing public awareness, authorities can work towards reducing road casualties and improving transportation safety.