Road Accident Dashboard - Document (Excel-Based)

Objective:

This dashboard is created to **analyze and visualize road accident data** across different factors such as accident severity, vehicle type, road type, lighting condition, and area type (urban/rural). It helps in identifying patterns and supporting data-driven decision-making for road safety initiatives.

Structure of the Dashboard:

1: Primary KPIs Section

Visual blocks with key performance indicators (KPIs) to give a quick summary.

KPIs to Create:

1. **Total Casualties**
2. **Fatal Casualties (Severe Deaths)**
3. **Serious Casualties (Critical Injuries)**
4. **Slight Casualties (Minor Injuries)**
5. **Casualties by Cars**

Visualizations:

- Use **number cards** (big bold values)
- Add **donut charts** (Data Labels ON, No Legends, % formatting)
- Insert **icons or shapes** to visually represent each KPI

2: Secondary KPIs – Casualties by Vehicle Type

A summary of casualties grouped by type of vehicle.

Vehicle Groups:

- Cars
- Motorcycles
- Buses
- Trucks

- Tractors
- Others

Visualizations:

- Use **icon + label** combinations (SmartArt or manual shapes)
- Add small **number cards** below or beside each icon
- Use **shapes or images** of vehicle types from Excel Icons or Insert → Pictures

3: 2021 vs 2020 Casualty Trend (Monthly)

A line chart comparing current year (CY) vs previous year (PY) month-wise data.

Visualizations:

- Use **Line Chart**
- X-axis: Month names (Jan to Dec)
- Y-axis: Casualty numbers
- Use two series: one for 2021, one for 2022
- Add **Data Labels and Legend**

4: Casualties by Road Type

Compare accident counts across different road types.

Visualizations:

- Use Horizontal Bar Chart
- Categories: Single carriageway, Dual carriageway, Roundabout, One-way, Slip road, etc.
- Sort by descending order

5: Casualties by Road Surface Condition

Show how many casualties occurred on dry, wet, or snow-covered roads.

Visualizations:

- Use **Tree Map** or **100% Stacked Bar**

- Categories: Dry, Wet, Snow/Ice

6: Urban vs Rural Casualties

Compare how many accidents happened in Urban vs Rural areas.

Visualizations:

- Use **Donut Chart**
- Two categories: Urban, Rural
- Highlight with contrasting colors (e.g., brown vs light beige)

7: Light Condition Analysis (Day vs Night)

Determine when most accidents happen — during daylight or darkness.

Visualizations:

- Use **Donut Chart**
- Categories: Daylight, Darkness
- Show both count and percentage

8: Filter Panel

Interactive panel to filter data based on:

1. **Urban or Rural**
2. **Years (2021, 2022, 2023)**
3. **Day of Week (Mon–Sun)**

Visualizations:

- Use **Slicers** (Insert > Slicer from Pivot Table)
- Style them with custom colors matching your theme

9: Linked Image Navigation

Clickable icons that navigate to the dataset or pivot pages.

1. Insert image or icon (Insert > Icons or Pictures)

2. Right-click > Link > Place in this Document > Select Sheet (e.g., Dataset)

3. Add a small hover effect using formatting

Data Setup Recommendation

- Use **Pivot Tables** behind all visuals
- Store raw data in one clean sheet (RoadAccidentData)
- Name your ranges or use Excel Tables
- Use helper columns (e.g., Year, Month, Light, Road Type Group) for better analysis