

# Road Accident Analysis Dashboard

Interactive Analytics for Road Safety Decisions





A d v a n c e   E x c e l

01

# Product Introduction

- Data-driven road safety analytics dashboard
- Focus on accident casualties and patterns
- Designed for decision-making and portfolio use



# Domain & Platform

- Domain: Road Safety & Transportation Analytics
- Platform: Microsoft Excel dashboard solution
- Method: KPI-driven visual analysis approach



# Problem Statement

- 01 • Accident data is large and complex
- 02 • Lack of centralized visual reporting system
- 03 • Difficult to identify high-risk patterns quickly
- 04 • Icon-based visual representation

# Project Objectives

Advance Excel



**01**

Analyze accident  
casualty trends

**02**

Identify high-risk  
accident conditions

**03**

Compare yearly  
accident trends

**04**

Support safety-  
focused decision  
making





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# 03 Dataset Overview

- Single, cleaned accident dataset
- Includes monthly and yearly accident records
- Covers year, vehicle, road, and light conditions







Advance Excel

# Dashboard Structure

**01**

KPI summary cards  
at top



**03**

Trend analysis  
visuals



**02**

Category-wise  
visual charts

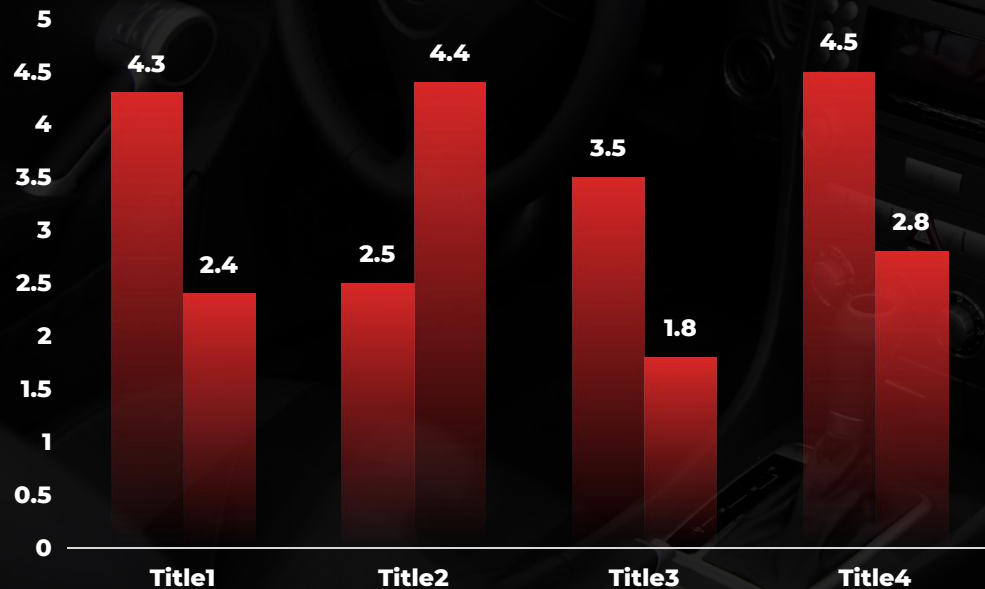


**04**

Interactive filters  
and slicers



## Primary KPI's



- Total accident casualties
- Fatal accident casualties
- Serious injury casualties
- Slight injury casualties
- Car-related accident casualties





# Severity Analysis

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**01**

Fatal vs Serious vs Slight injuries

**02**

Donut charts showing percentage share

**03**

Helps prioritize safety focus areas



# Vehicle Type Analysis

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01

Cars accident casualties

8000+

02

Motorcycles accident  
casualties

16400km

03

Trucks and Buses accident  
casualties

04

Tractor accident casualties



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# CY vs PY Trend Analysis

- Monthly casualty comparison
- Current Year vs Previous Year
- Line chart visualization





# Road Type Analysis

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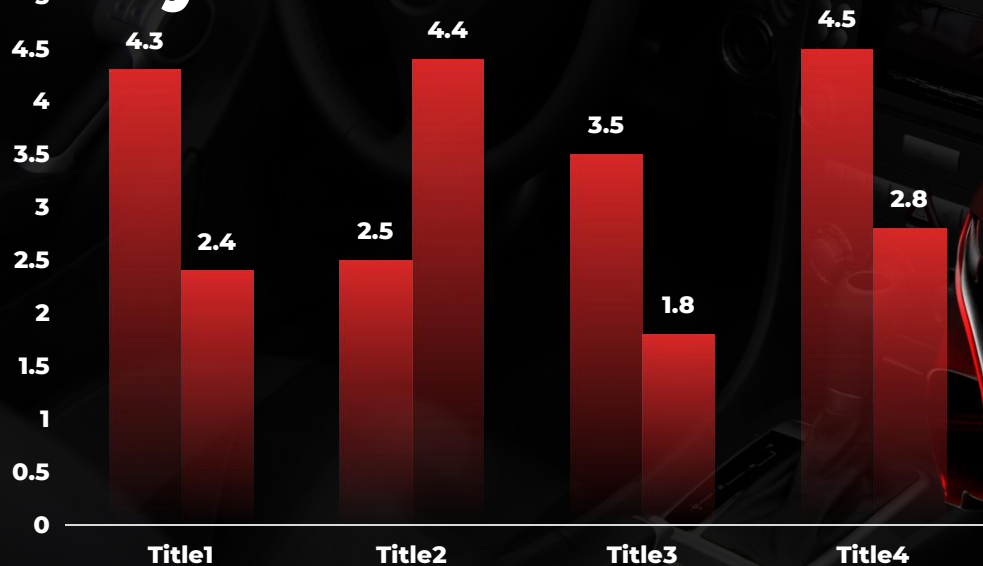
- Single carriageway roads
- Dual carriageway roads
- Roundabout roads
- Oneway street roads
- Slip road and unknown
- Horizontal bar chart





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# Road Surface Analysis



- Dry road conditions
- Wet road conditions
- Snow conditions
- Vertical Column chart





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# 01 Area-wise Analysis

- Urban vs Rural casualties
- Pie chart comparison
- Urban areas show higher casualties



# Light Condition Analysis

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**01**

Daylight accident cases

**02**

Darkness accident cases

**03**

Area chart visualization



# Filters & Interactivity

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10%

01

Year-based slicer

20%

02

Weather condition  
filter

04

40%

Wind condition filter

03

30%

Dynamic dashboard  
updates



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# Key Insights

- 01 • Slight injuries account for most casualties
- 02 • Cars contribute the highest accident count
- 03 • Single carriageway roads are high-risk
- 04 • Most accidents occur during daylight



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# Business Value

- Supports road safety planning
- Identifies accident-prone conditions
- Enables quick, data-driven decisions





# Tools & Features Used



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- Microsoft Excel
- Power Query & Data Cleaning
- Pivot Tables and Pivot Charts
- Slicers for interactivity
- Icons and shapes for storytelling
- WPS Office Presentation
- GitHub



T o o l s & F e a t u r e s U s e d

# Conclusion

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02

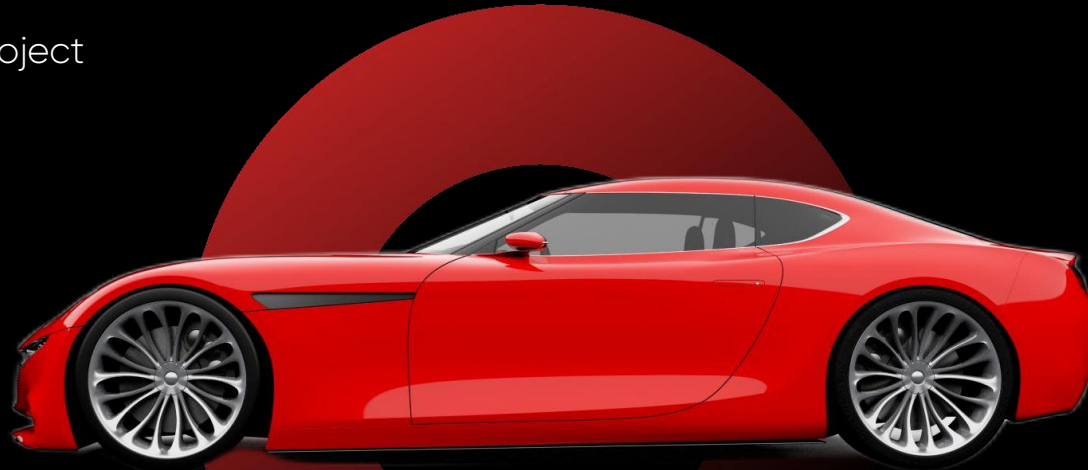
Strong dashboard  
storytelling approach

01

Complete end-to-end  
Excel analytics project

03

Suitable for Data Analyst  
and MIS roles



# Excel Road Accident Analysis Dashboard



WPS Office  
make it simple

Project  
Preview



# Final Dashboard



## Road Accident Analysis Dashboard



Number of Casualties 314300

### Casualties by Vehicle Types



248878



26866



26379



11227



950

### Fatal Sevrity

4181

1%

### Serious Sevrity

42996

14%

### Slight Sevrity

267123

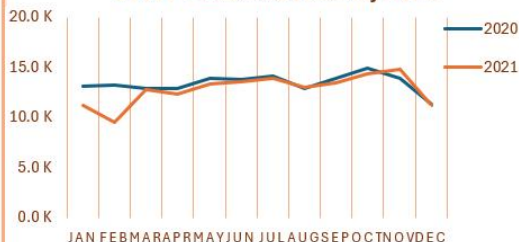
85%

### Casualties by Car

248878

79%

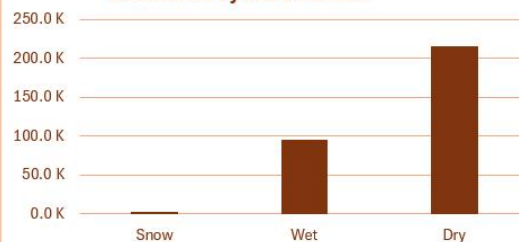
### CY vs PY Casualties Monthly Trend



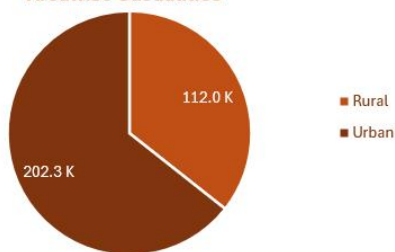
### Casualties by Road Type



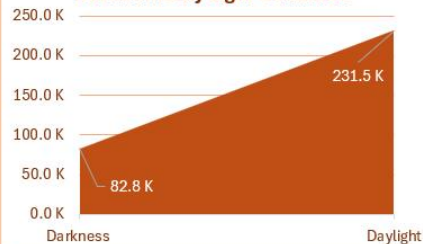
### Casualties by Road Surface



### Areawise Casualties



### Casualties by Light Condition



### Accident Date

All Periods

YEARS



### Wind Condition

High Win...

No High ...

Or Mist

Other

### Weather Conditions

Fine

Fog

Other

Raining

Snowing



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