

A d v a n c e E x c e l

Road Accident Analysis Dashboard

Interactive Analytics for Road Safety Decisions



Presentations are communication tools that can be used as speeches, reports, and more.



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





03 Dataset Overview

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



Dashboard Structure

01

KPI summary cards
at top



02

Category-wise
visual charts



03

Trend analysis
visuals

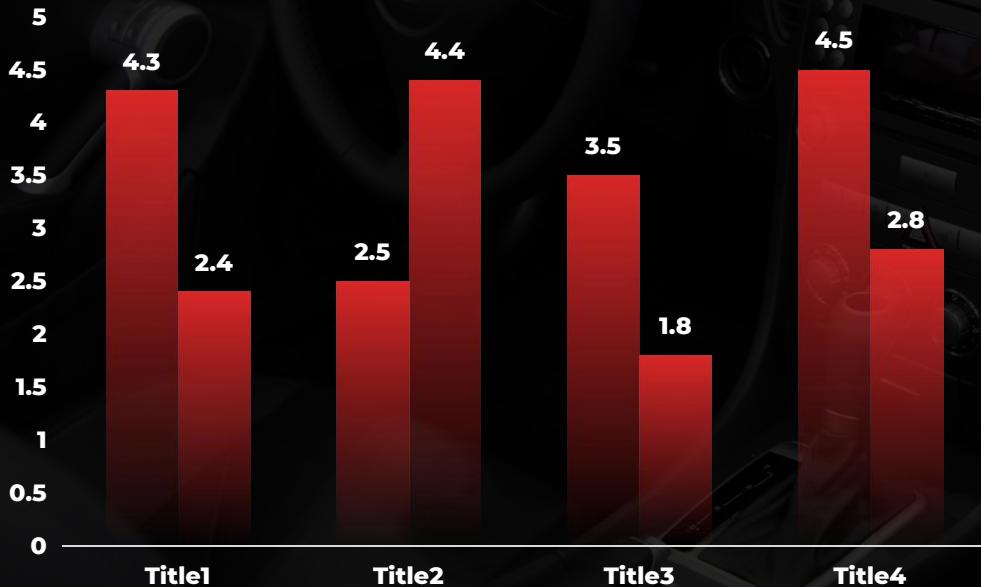


04

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

Advance Excel



01

Fatal vs Serious vs Slight injuries

02

Donut charts showing percentage share

03

Helps prioritize safety focus areas

Vehicle Type Analysis

Advance Excel



01

Cars accident casualties

8000+

03

Trucks and Buses accident
casualties

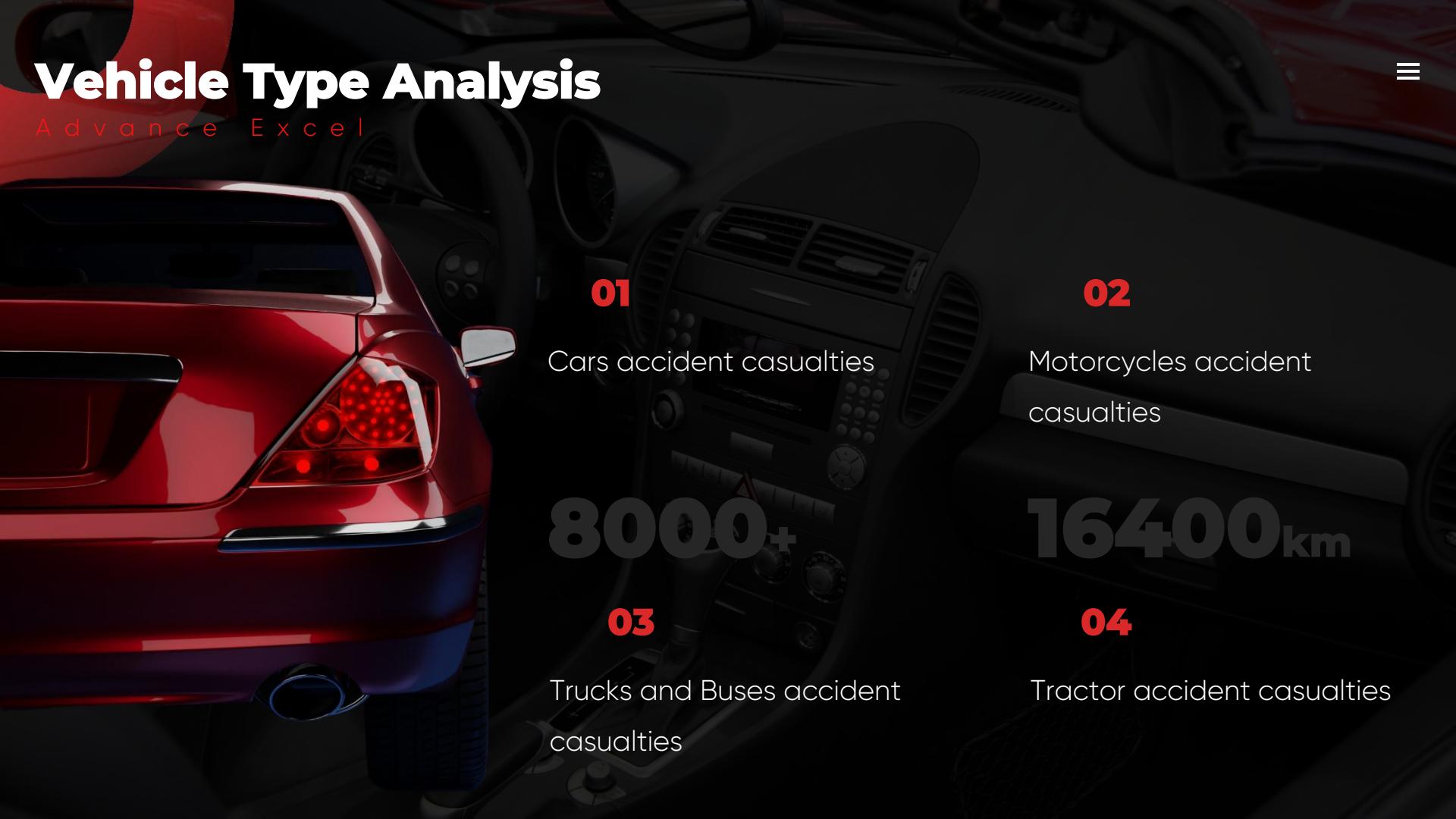
02

Motorcycles accident
casualties

16400km

04

Tractor accident casualties



Advance Excel



CY vs PY Trend Analysis

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



Road Type Analysis

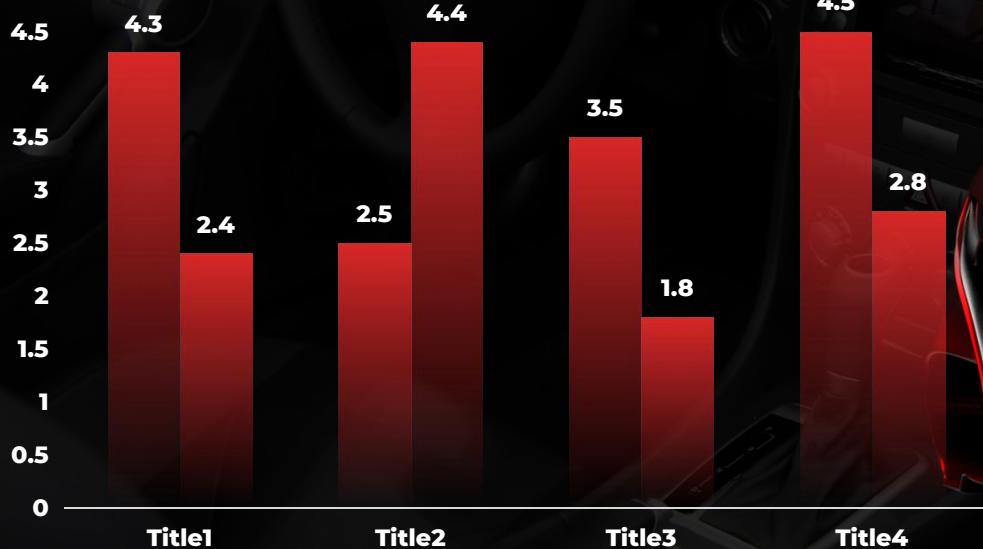
Advance Excel



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



Road Surface Analysis



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

01

Area-wise Analysis

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



Light Condition Analysis

Advance Excel



01

Daylight accident cases

02

Darkness accident cases

03

Area chart visualization



Filters & Interactivity

Advance Excel

10%

Year-based slicer

01

20%

Weather condition
filter

02



04

Wind condition filter

40%

03

Dynamic dashboard
updates

30%



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



Business Value

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

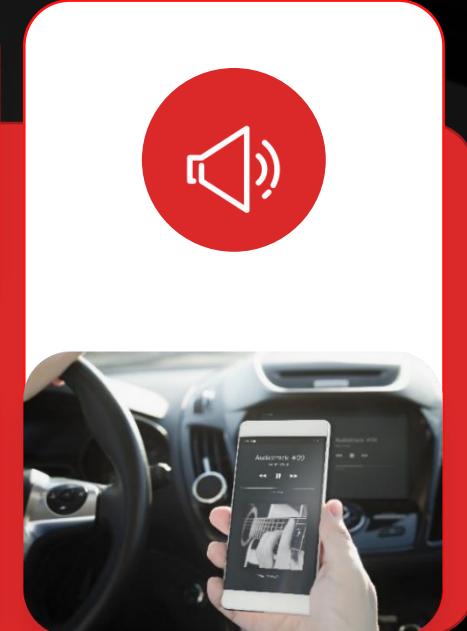


Tools & Features Used



Advance Excel

- 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

Advance Excel



01

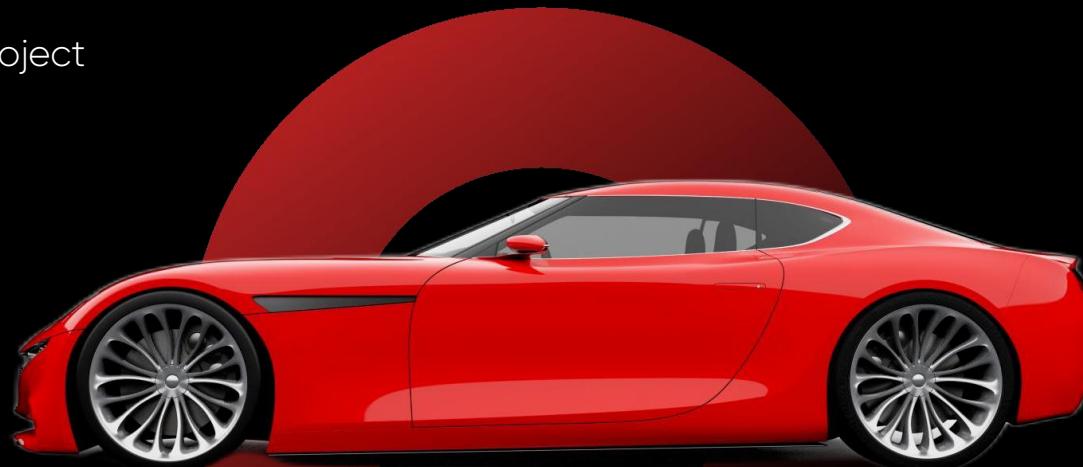
Complete end-to-end
Excel analytics project

02

Strong dashboard
storytelling approach

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



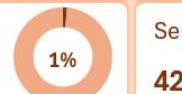
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950

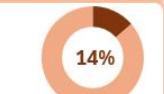
Fatal Sevrrty

4181



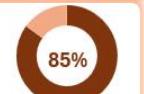
Serious Sevrrty

42996



Slight Sevrrty

267123

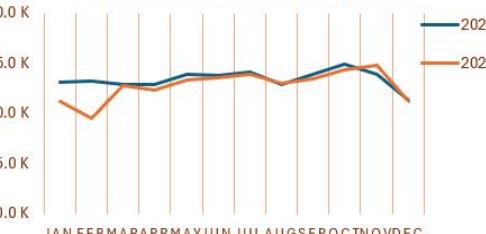


Casualties by Car

248878



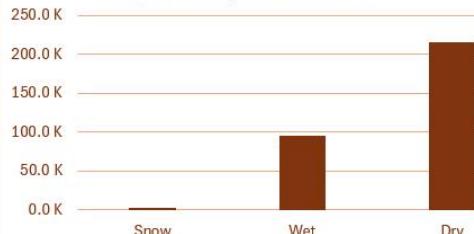
CY vs PY Casualties Monthly Trend



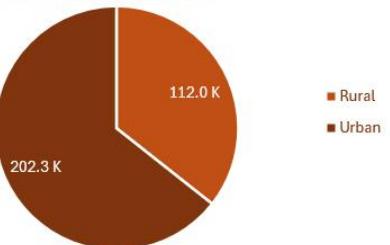
Casualties by Road Type

Single Carriageway	234334
Dual Carriageway	47183
Roundabout	21169
One Way Street	6506
Slip Road	3328
Unknown	1780

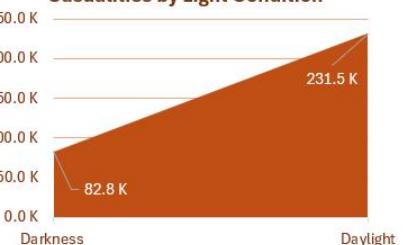
Casualties by Road Surface



Areawise Casualties



Casualties by Light Condition



Accident Date

All Periods

YEARS

2020

2021

2022

Wind Condition

High Wind...
Or Mist
Other

Weather_Conditions

Fine Fog Other Raining Snowing





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