



# Road Accidents Analysis



# Introduction

- The road accidents data analysis examines key patterns, causes, and trends to identify critical risk factors.
- By exploring data on accident frequency, locations, time, and contributing factors. The report aims to offer actionable insights for key stakeholders to enhance preventive measures, and reduce overall accident rates.





# Analysis Process Steps

1. Define Objectives
2. Identify Data Source
3. Data Collection and Cleaning
4. Data Processing
5. Choose a Visualisation Tool
6. Design Layout
7. Create Visualisation
8. Add Interactivity
9. Test and Validate



# Objective

- The analysis aims to uncover the trends and patterns in the accidents occurrences with help of the following:
- Total casualties taken place after the accident.
- Total casualties and percentage of total with respect to accident severity and maximum casualties by type of vehicle.
- Total casualties with respect to vehicle type.
- Monthly trend showing comparison of casualties for the current year and previous year.
- Casualties' distribution on different road types and road surface conditions.
- Variation in casualties depending on area and light conditions.





# Stakeholders

- Ministry of Transport
- Road transport department
- Police Force
- Emergency Services Department
- Road Safety Corps
- Transport Operators and Mechanics
- Traffic Management Agencies
- Public
- Media

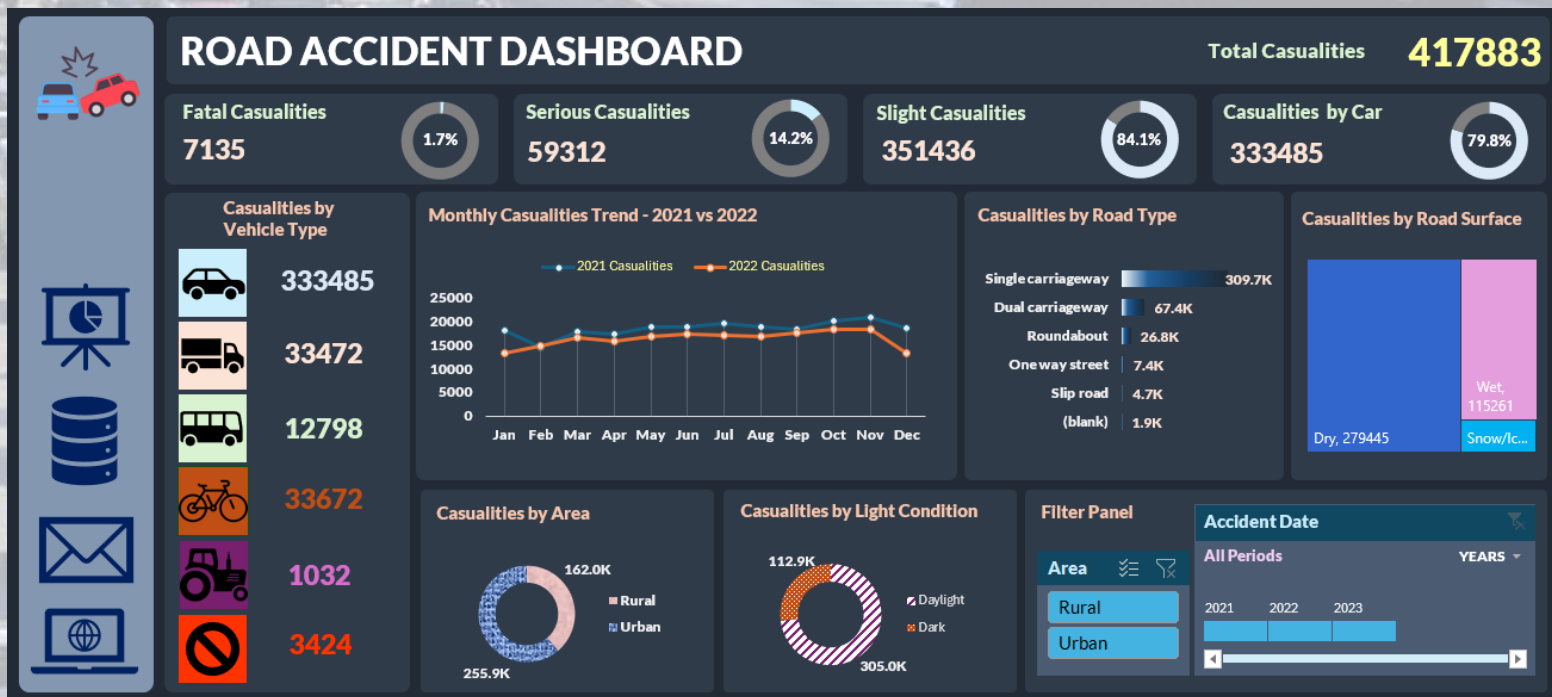


# Dataset & Technology

- Dataset:
  - File type: .xlsx
  - 307973 rows
  - Number of fields: 21
  - Fields list includes: Accident index, Accident date, Accident severity, Area, Light conditions, type of vehicle, type of road and road surface conditions, etc.
- Technology used:
  - MS Excel



# Dashboard



# Conclusion

- The total casualties amount to as high as 417883, which is alarmingly high.
- Among the casualties, fatal casualties comprise 1.7% resulting in demise of 7135 individuals.
- The maximum number of casualties occur by either cars, taxis or private hired cars. They comprise almost 80% of all the casualties.
- The number of accidents have decreased from 2021 to 2022 in all the months except one.



# Conclusion

- Single carriageway type of road contributes to more accidents than all other type of roads combined.
- There are more occurrences of accidents on dry surface conditions than on wet or snowy surfaces. So, the accidents may be due to machine failures or human negligence.
- The maximum number of casualties occur in daylight which amount to around 75%.
- The urban locale contribute to more number of casualties as compared to rural.