Road Accident Analysis

Data Analysis Objective:
Road Ministry wants to create a road accident dashboard for the year 2021 and 2022 to provide them with insights on following indicators

Primary Indicator:

- 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

Secondary Indicators

- Total casualties with respect to vehicle type
- Monthly trend showing comparison of casualties for current year and previous year
- Maximum casualties by road type
- Distribution of total casualties by road surface
- Relation between casualties by area/location & Day/Night

Key Stake Holders involved in this Project:

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

Project Insights

- There has been a 40% reduction in the total number of casualties between the year 2021 and 2022. The 40% reduction could be attributed to the road campaign initiative being done by the road ministry
- Saloon cars accounted for 80% of vehicle type with the highest number of casualties. A possible explanation could be that saloon cars are the most commonly used type of vehicle on the roads, so there are simply more of them involved in accidents.
- Insight from my analysis shows that there were more casualties in the urban areas than rural areas. 60% of road casualties occurred in the urban areas. A possible explanation could be that the speed limits in the urban areas maybe higher than that of the rural area. Another possible explanation could be the population density. We have a lot more people living in the urban areas.
- Insight from my analysis shows carriageway amounted to 75% of road casualties as compared to the other types of road. A possible explanation could be that single carriageway are much narrower which mean drivers of vehicles have less space to manoeuvre making it more difficult for drivers to avoid accidents.

- Insight from my analysis shows that 66% of road casualties occurred on the dry road surface as compared to the wet and snow surface. A possible explanation for could be the likelihood of drivers feeling more confident and inclined to drive faster on dry roads, leading to the high casualties

Analysis

My analysis of the road accident data reveals several key insights. Firstly, there has been a significant 40% reduction in the total number of casualties between 2021 and 2022, which may be attributed to the road campaign initiative by the road ministry.

Secondly, saloon cars account for 80% of the vehicle types involved in road accidents, possibly due to their high usage on the roads. Thirdly, there were more casualties in urban areas compared to rural areas, with 60% of road casualties occurring in urban areas. This could be due to higher speed limits in urban areas and higher population density.

Fourthly, 75% of road casualties occurred on carriageways, with single carriageways being the most common. This could be attributed to narrower roads, giving drivers less space to manoeuvre and avoid accidents.

Finally, 66% of road casualties occurred on dry road surfaces compared to wet and snow surfaces, which could be due to drivers feeling more confident and driving faster on dry roads. These insights provide valuable information for road safety campaigns and policy-making aimed at reducing the number of road accidents and fatalities.

In the year 2021, there were a high number of road accidents resulting in casualties. However, the following year, there was a significant decrease in the number of casualties by 40%. This reduction was due to the road campaign initiative introduced by the road ministry to educate drivers on safe driving practices.

Analysing the data further, it was discovered that saloon cars were responsible for the highest number of casualties, accounting for 80% of all vehicle types involved in accidents. This could be due to the popularity of saloon cars, as they are the most commonly used vehicles on the roads.

Additionally, the analysis showed that 60% of all road casualties occurred in urban areas. This could be attributed to the higher speed limits in urban areas and the higher population density of these areas. The higher speed limits could lead to drivers taking more risks while driving, resulting in more accidents.

Furthermore, it was discovered that single carriageways were responsible for 75% of all road casualties. This could be due to the narrower lanes on these roads, making it harder for drivers to avoid accidents.

Finally, it was discovered that 66% of all road casualties occurred on dry road surfaces, compared to wet and snow surfaces. This could be due to drivers feeling more confident driving on dry roads and driving at higher speeds, leading to more accidents.

Overall, the insights from the analysis highlight the need for drivers to be more cautious while driving, especially in urban areas and on single carriageways. The road ministry's road campaign initiative has made significant progress in reducing the number of casualties, and it is vital to continue such initiatives to ensure safer roads for all.