Summary Report: Analysis of Road Accidents from Power BI Dashboard

Introduction:

The provided Power BI dashboard offers a detailed analysis of road accidents based on various factors such as light conditions, area type, speed limit, day of the week, road type, vehicle type, road surface condition, and comparison of current year casualties with the previous year. This report highlights key insights derived from the dashboard's visualizations.

Key Findings and Insights:

The provided image is a Power BI dashboard that offers a comprehensive analysis of road accidents. Here are the key insights derived from the various visualizations:

1. Casualties by Light Conditions: The pie chart shows that the majority of casualties (73.8%) occurred during light conditions, while 26% occurred in the dark.

2. Casualties by Area: Most casualties (61.95%) occurred in urban areas, while 38.05% occurred in rural areas.

3. Casualties by Speed Limit: The highest number of casualties (70.68%) occurred on roads with a speed limit of 40 mph or less, followed by 19.93% on roads with a 60 mph limit and 8.55% on roads with an 80 mph limit or higher.

4. Average Casualties by Day of the Week: The line chart illustrates that the average number of casualties peaks on Saturdays and gradually decreases towards the beginning of the week, with Fridays having the second-highest average.

5. Casualties by Road Type: The majority of casualties occurred on single carriageways, followed by dual carriageways and roundabouts.

6. Current Year Casualties vs. Present Year Casualties: The line chart compares the monthly trend of casualties for the current year against the previous year, showing fluctuations throughout the year.

7. Casualties by Vehicle: Cars had the highest number of casualties (155,804), followed by goods vans (15,905), motorcycles (15,610), buses (6,573), and other vehicles (1,845).

8. Casualties by Road Surface Condition: Wet or damp road conditions accounted for the highest number of casualties (50,365), followed by dry roads (131,976), frost or ice (9,190), snow (4,028), and floods over 3cm deep (178).

9. Total Current Year Casualties: The dashboard displays the total number of casualties for the current year (195.7K), with a decrease of 11.9% compared to the previous year.

10. Current Year Fatal, Serious, and Slight Casualties: The dashboard breaks down the current year casualties into fatal (2.9K, down 33.3%), serious (27.0K, down 16.2%), and slight (165.8K, down 10.6%) categories.

11. Total Current Year Accidents: The total number of accidents for the current year is 144.4K, which is a decrease of 11.7% compared to the previous year.

This Power BI dashboard provides a comprehensive overview of road accident statistics, allowing for in-depth analysis of various factors contributing to casualties, such as light conditions, speed limits, road types, vehicle types, and road surface conditions.

Conclusion:

This Power BI dashboard provides valuable insights into road accident statistics, allowing stakeholders to identify key risk factors and prioritize interventions to improve road safety. By analysing factors such as light conditions, area type, speed limits, road types, vehicle types, and road surface conditions, stakeholders can develop targeted strategies to reduce the number of road accidents and minimize casualties.

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