SUMMARY

This Excel dashboard provides a powerful and interactive way to analyze road accident data. The various KPIs and visualizations allow for quick identification of key patterns, such as the higher occurrence of accidents on wet roads and in urban areas. The project effectively demonstrates the use of **Excel's visualization tools** to create a comprehensive report on accident trends, severity, and types.

Overview & KPIs:

- **Total Casualties (417,883)**: This represents the total number of road casualties recorded.
- **Fatal Casualties (7,135)**: This donut chart highlights the number of fatalities, making up 1.7% of the total casualties.
- **Serious Casualties (59,312)**: Another KPI showing the number of serious injuries, accounting for 14.2% of the total.
- **Slight Casualties (351,436)**: A large proportion (84.1%) of casualties are categorized as slight injuries.
- **Casualties by Car (333,485)**: The majority of casualties (79.8%) involved cars, highlighting a significant vehicle type in road accidents.

Monthly Trends (2021 vs. 2022 Casualties Monthly Trends):

This line chart compares monthly casualties from 2021 and 2022. Key observations include:

- There's a general consistency between the two years.
- Both years exhibit a peak during the summer months (June to August).
- There's a drop in casualties in December for both years.

Casualties by Vehicle Type:

This section uses icons and numbers to display the breakdown of casualties based on vehicle types. The most common vehicles involved are:

- **Cars** (333,485 casualties),
- **Motorcycles** (33,672 casualties),
- **Pedal Cycles** (33,472 casualties),
- **Buses/Coaches** (1,278 casualties),
- **Others** like goods vehicles and taxis (1,032 casualties),
- **Unknown Vehicles** (3,424 casualties).

Casualties by Road Type:

This bar chart shows the number of casualties by different road types:

- **Single Carriageways** account for the highest number of casualties at 309.7k.

- **Dual Carriageways** come next with 67.4k.
- **Roundabouts** and **One Way Streets** are responsible for smaller portions (26.8k and 7.4k, respectively).

Casualties by Road Surface:

This treemap highlights casualties based on road surface conditions:

- **Wet Roads** (115,261 casualties) are the most dangerous, followed by **Snow/Fog** (22,781 casualties).
- **Dry Roads** (279,445 casualties) represent a significant portion, though they account for fewer incidents compared to hazardous surfaces.

Casualties by Location/Area:

A donut chart categorizes casualties by whether they occurred in **Urban** or **Rural** areas:

- **Urban Areas** had 305.0k casualties.
- **Rural Areas** had significantly fewer, with 112.9k casualties.

Casualties by Light Condition:

This chart visualizes accidents during **Day** or **Night** conditions:

- Most accidents occurred during the day (305.0k casualties), while night-time accidents accounted for 112.9k casualties.

This project would be an excellent example of data-driven decision-making and could be used to inform road safety initiatives and policy-making by understanding the factors contributing to road accidents.