Dashboard 1 :-

ROAD ACCIDENT OVERVIEW

Days in a Week
All

Road Surface
All

Weather Condition
All

Total No. of Accidents	No. of Fatal Accidents	No. of Serious Accidents	No. of Slight Accidents
229.1K	2246	29.1K	197.7K

Casualities by Vehicle Type

Bike
18910

Bus
6987

Car
182353

Others
1911

Tractor
553

Van
18405

Accident by Rural vs Urban

Rural
73K (31.7%)

Urban
157K (68.3%)

Accident by Light conditions

Dark 58K (25.5%)

Day
171K (74.5%)

Count of Accident by Road Type

Single carriageway	0.17M
Dual carriageway	0.03M
Roundabout	0.02M
One way street	0.01M
Slip road	0.00M

Accidents by Location

Dashboard 2 :-

ANALYSIS & TRENDS

Road Surface
All

Weather Condition
All

Total No. of Accidents	No. of Fatal Accidents	No. of Serious Accidents	No. of Slight Accidents
229.1K	2246	29.1K	197.7K

Days in a Week

Friday	Monday	Saturday	Sunday	Thursday	Tuesday	Wednesday

Accidents by Year

Accident by Severity

Slight	198K
Serious	29K
Fatal	2K

Accident by Road Surface

Dry	159K
Rain	58K
Snow	12K

Accident by Days

Friday	38K
Wednesday	35K
Tuesday	35K
Thursday	35K
Monday	33K
Saturday	30K
Sunday	23K

Accident by Junction Control

Give Way/Uncontrolled	114K
Others	91K
Auto traffic signal	24K

Accident by Weather Conditions

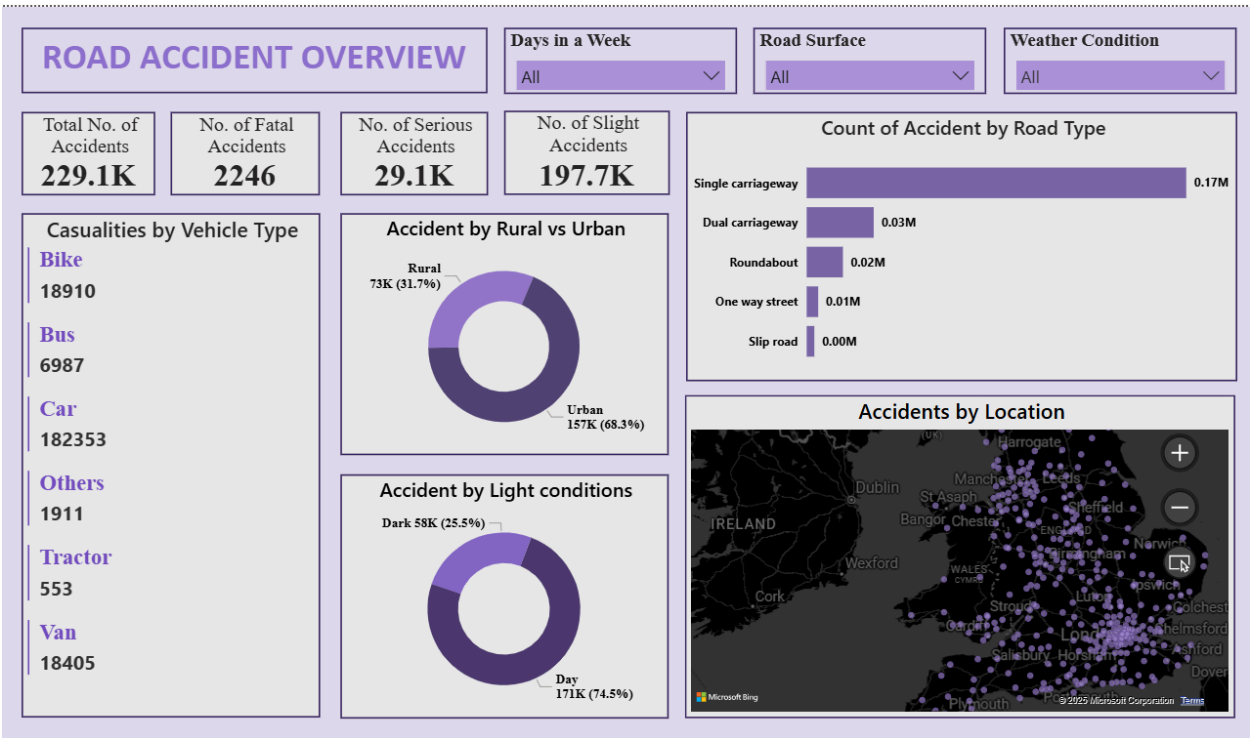|	
Fine	185K
Rain	30K
Others	10K
Snow	4K

While working with road accident data, my primary goal was to explore patterns and uncover the factors that contribute most to accidents. I used Power BI to turn a large dataset into a clean, interactive dashboard that lets users explore trends based on time, location, road and weather conditions, accident severity, and traffic controls.

How I Approached the Analysis :-

I started by cleaning and shaping the data to make it meaningful and easy to filter. Once the structure was ready, I used a mix of line charts, bar charts and slicers to visualize the data. I focused on keeping the layout simple and interactive, so that insights could be drawn instantly by selecting conditions like road surface type or day of the week.

The dashboard is split into two main pages:

- **Overview**: Gives a snapshot of overall accident numbers and vehicle-wise casualties.

- **Trends & Patterns**: Lets you explore when, where, and under what conditions accidents occur most.

Key Insights from the data :-

1. **Accidents Over Time**

   Accidents remained consistently high from early 2021 to the end of 2022. Some spikes are visible around mid-2021 and early 2022, likely linked to seasonal or behavioral changes.

2. **Severity Breakdown**

   Most accidents recorded were minor (slight), with nearly 198K cases, while serious ones made up 29K and fatal ones just over 2K. This tells us that while most accidents aren't deadly, they still cause disruption and injury and prevention at this stage could stop them from becoming worse.

3. **Day of the Week**

   Fridays had the most reported accidents, with 38K, while Sundays saw the least. This aligns with typical work-week fatigue or increased traffic as people wrap up their week.

4. **Weather Conditions**

Interestingly, most accidents occurred during clear weather — over 185K. This suggests that safe-looking weather doesn't always mean safe roads. It's likely that driver distraction, speed, or overconfidence in good conditions played a part.

5. **Road Surface**

Accidents happened most often on **dry roads (159K)**, compared to **rainy** or **snowy** surfaces. Again, this points to human error being a bigger factor than the environment.

6. **Junction Controls**

The most accidents occurred at **uncontrolled junctions (Give Way/Uncontrolled)** — over **114K**. In contrast, areas with **traffic signals** saw far fewer incidents, suggesting that better infrastructure and clearer road rules can significantly reduce risk.

Final Thoughts :-

- Most accidents happen in **clear weather** and on **dry roads**, suggesting **driver behavior** is a key issue.

- **Fridays** see the **highest number of accidents**, possibly due to end-of-week fatigue or rush.

- **Junctions without proper controls** (like signals or signs) account for a large number of accidents, so better **traffic management** is needed.

- A majority of the accidents are slight, but they still indicate unsafe conditions and potential for worse outcomes.