

## Purpose

The purpose of this Power BI analysis is to investigate recent road accidents and uncover their underlying causes. By examining detailed accident data, I aim to identify patterns and trends that could reveal contributing factors, such as high-risk locations, common times, or specific driver behaviors.

My goal is to provide actionable insights that can guide efforts to enhance road safety. With these insights, I hope to develop targeted recommendations and strategies to reduce accidents, improve road conditions, and ultimately protect lives. This analysis will help inform decision-makers and contribute to safer driving practices and policies.

- by

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Disclaimer: This analysis is intended solely for educational purposes and does not reflect real-world behaviors or actual events. The data used in this analysis is hypothetical and should not be interpreted as representing genuine road accident statistics. The data sources utilized in this study do not correspond to actual incidents or locations.

# ROAD ACCIDENT ANALYSIS

Road condition

All

Weather condition

All

cy\_casualties

**196K**

-11.89%

CY Accidents

**144K**

-11.7%

CY fatal casualties

**2.9K**

-33.29%

CY Serious casualties

**27K**

-16.2%

CY Slight casualties

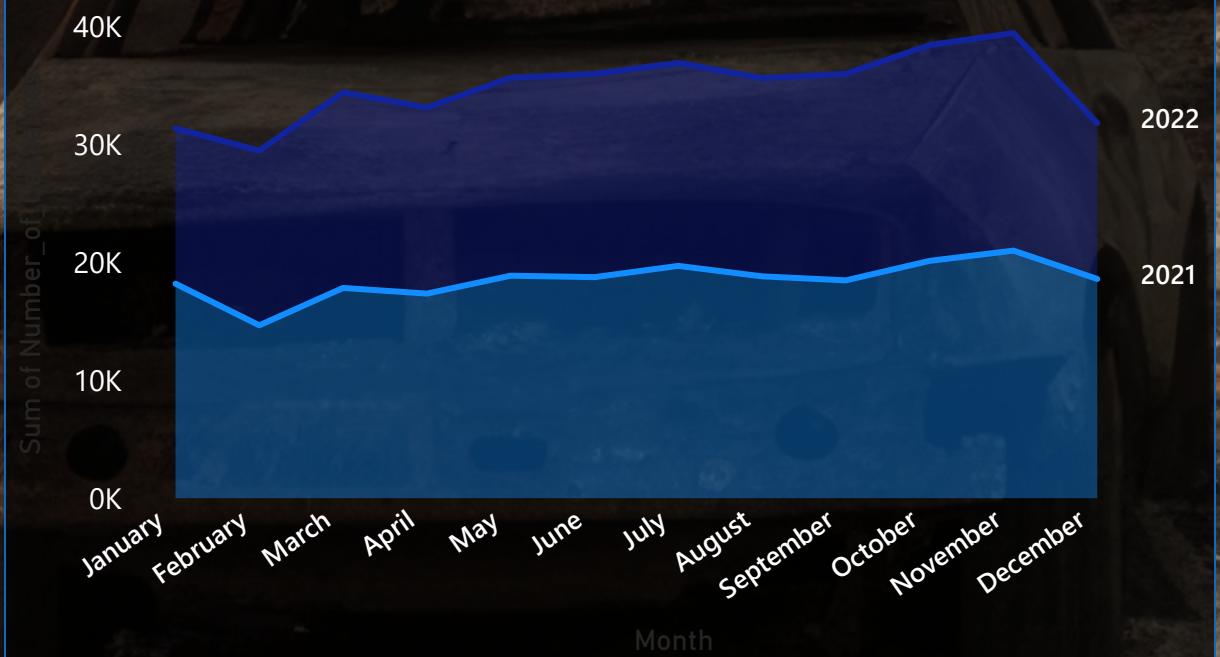
**166K**

-10.6%

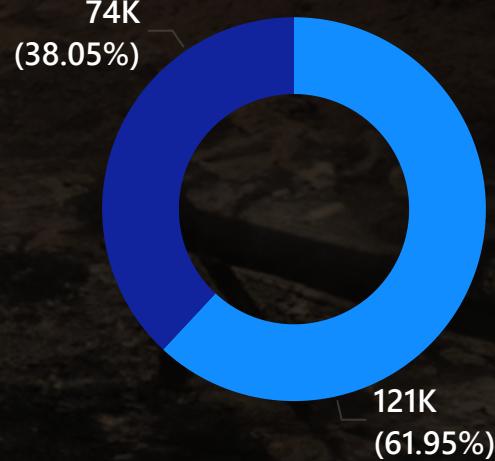
## CY Casualties by Vehicle

	<b>Agricultural vehicle</b>	399
	<b>Bikes</b>	15610
	<b>Bus</b>	6573
	<b>Car</b>	155804
	<b>Others</b>	1446
	<b>Van</b>	15905

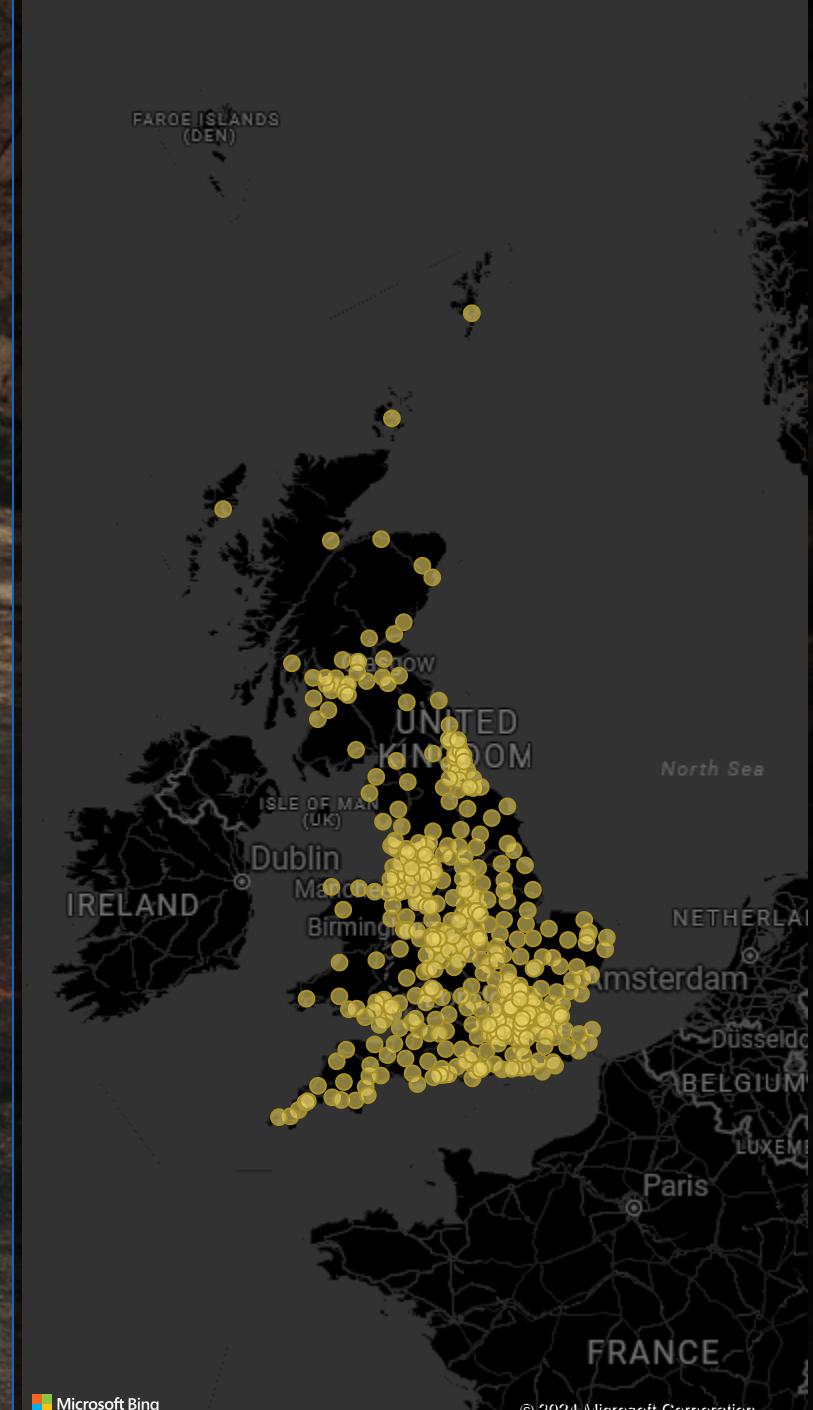
## CY Casualties by Month and year



## cy casualties by Urban or Rural Area



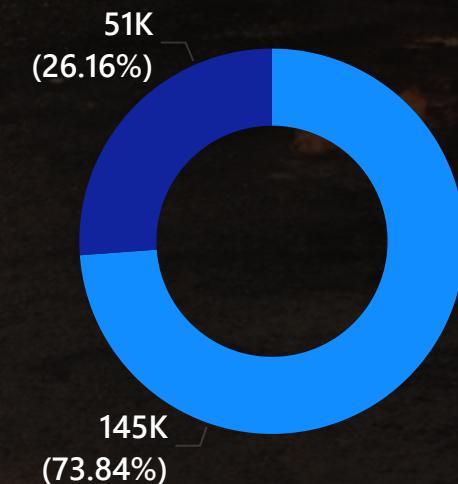
## Casualties by Location



## CY casualties by Road Type



## CY casualties by Light Conditions



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# My observations & insights

## My Observations

In my recent road accident analysis, I compared casualty data from the current year (CY) with the previous year (PY) to uncover trends and patterns in road safety. The analysis showed a decrease in casualties across all severity categories—serious, slight, and fatal—indicating an overall improvement compared to last year.

### **Key Findings:**

#### Decrease in Casualties:

I observed a notable decrease in the percentage of casualties across serious, slight, and fatal categories. This suggests that either road safety measures have been effective or there are other factors contributing to the reduction in accident severity.

#### Monthly Trends:

My analysis revealed a consistent trend of increased road accidents in November. This spike appears to be linked to the rainy season in the UK, which likely contributes to more hazardous driving conditions and, consequently, a higher number of accidents.

#### Most Affected Groups:

Car drivers are the most impacted group, experiencing the highest rate of accidents. This finding highlights the need for focused safety interventions for drivers, especially during adverse weather conditions.

#### Urban Areas:

Accidents are more frequent in urban areas compared to rural ones. This trend emphasizes the importance of enhancing traffic management and safety measures in city environments.

## Power BI Visualization and Insights:

### Filters and Segmentation:

**Weather Conditions :** I used Power BI to apply filters based on weather conditions, allowing for an analysis of how different weather scenarios (e.g., rain, fog) impact the number and severity of road accidents.

**Road Conditions:** I also incorporated filters for road conditions (such as wet or dry) to evaluate how the state of the road surface affects accident rates.

### Comparative Analysis:

**CY vs. PY Trends:** The Power BI dashboard effectively visualizes the comparison between CY and PY casualty data. Through line charts and bar graphs, I presented a clear view of the reduction in casualties over time and highlighted any noticeable patterns or anomalies.

### Interactive Features:

**Monthly and Seasonal Trends:** I included interactive features in the dashboard that allow users to drill down into monthly data, providing insights into specific months with higher accident rates and the impact of seasonal changes.

### Stakeholder Engagement:

**Actionable Insights:** My visualizations offer stakeholders clear, actionable insights into the factors driving road accidents. The ability to filter data by weather and road conditions helps in pinpointing areas that need improvement and focusing safety measures where they are most needed.