**Project Title:**

**Road Accident Dashboard – UK Districts**

**Case Study**

**1. Data Story**

**• What questions were we trying to answer?**

We wanted to understand the patterns behind road accidents in the UK.

* Which road types are most dangerous?
* Do weather and road conditions affect severity?
* Are certain vehicles involved in fatal crashes more often?  
  Our goal was to highlight areas and conditions that contribute to accidents, especially fatal ones.

**• Key variables we looked at:**

* Accident\_Severity (Fatal, Serious, Slight)
* Road\_Type, Weather\_Conditions, Vehicle\_Type
* Casualties, Longitude, Latitude, Date

Limitations: The dataset doesn’t include specific driver behavior or accident causes, so our insights are based only on patterns in the available data.

* **Charts we created to explore the data:**

We built 9 different charts, including:

* KPI Tiles (Total, Fatal, Serious, Slight Accidents) with YoY change
* Line Chart showing monthly trends
* Donut Charts for Weather and Road Surface
* Bar Chart showing casualties by Road Type
* Map showing UK accident hotspots
* Table showing severity by Vehicle Type

These visuals helped us break down what’s happening, where, and under what conditions.

**• Dashboard interactivity:**

We made the dashboard interactive to allow deeper exploration:

* A **dropdown** to filter by accident severity
* A **toggle** to compare data for current vs previous year
* A **year selector** that updates all charts at once

**• What we discovered:**

* Most fatal accidents happen in clearweather and on dry roads, which was surprising.
* Single carriageways were the most dangerous road type.
* Cars were involved in most fatal crashes.
* Although overall accidents are decreasing, fatal ones are still common in cities like London, Manchester, and Birmingham.

Our dashboard helps traffic agencies understand these patterns and focus efforts on the right issues.