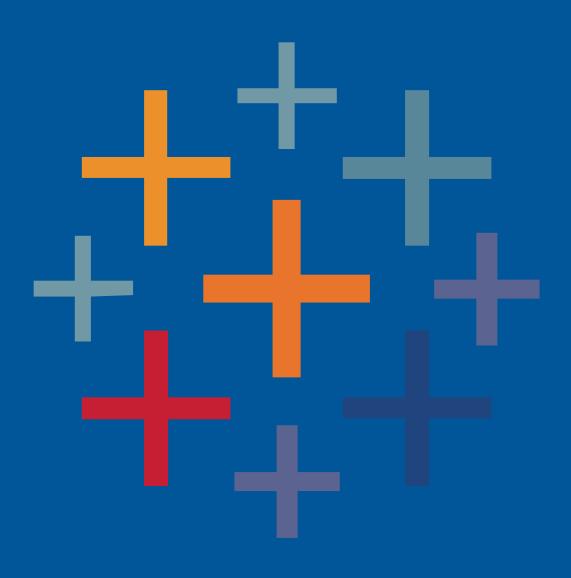# Road Accident Fatalities Analysis

# Assignment Questions

# Road Accident Fatalities Analysis

**Dataset Overview :**

This Road Accident Fatalities Dataset contains 40-50 records with key details on accident locations, road types, weather conditions, speeding, and safety measures. It helps analyze fatality trends, emergency response impact, and accident severity. The dataset is ideal for Tableau visualizations, providing insights into accident causes and prevention strategies.

**Dataset Link:** *Road_Accident_Fatalities*

**Column Descriptions:**

**Accident ID** – A unique identifier for each accident.
**Date** – The date when the accident occurred.
**City** – The city where the accident took place.
**Road Type** – The type of road where the accident happened (e.g., Highway, City Road, Expressway, Rural Road).
**Weather Condition** – The weather conditions during the accident (e.g., Clear, Rainy, Foggy, Snowy).
**Time of Day** – The time of day when the accident occurred (Morning, Afternoon, Evening, Night).
**Vehicle Type** – The type of vehicle involved in the accident (e.g., Car, Bike, Truck, Bus).
**Speeding** – Indicates whether speeding was involved in the accident (Yes/No).
**Traffic Signal Violation** – Whether any traffic signal rule was violated (Yes/No).
**Seat Belt Used** – Whether the driver/passengers were wearing seat belts (Yes/No).
**Helmet Used** – Whether a helmet was used by two-wheeler riders (Yes/No/N/A).
**Fatalities** – The number of deaths caused by the accident.
**Injuries** – The number of people injured in the accident.
**Emergency Response Time (mins)** – The time taken for emergency services to arrive at the accident scene.

**Task 1 : Handling Missing Values in the Dataset**
**Goal : S**ome records in the dataset have N/A values in the "Helmet Used" column. Your task is to replace all "N/A" values with "Unknown" in Tableau.

**Task 2 : Visualizing Road Accident Trends Over Time**
**Goal :** Use a **Line Chart** to analyze how road accident occurrences fluctuate over time.

**Task 3 : Impact of Weather Conditions on Accidents**
**Goal :** Use a **Heatmap** to analyze how weather conditions impact the number of accidents.

**Task 4 : Compare Accidents with and without Safety Measures**
**Goal :** Analyze the impact of seat belt and helmet usage on accident outcomes.

**Task 5 : Comparing Fatality Rates by Road Type and Speeding Cases**

**Goal :** Use a **Tree Map** to compare fatality rates across different road types and analyze the impact of speeding.

**Task 6 : Analyzing Accidents by Emergency Response Time using Parameters**
**Goal :** Create a parameter in Tableau that allows users to set a custom threshold for Emergency Response Time (mins). Based on this threshold, categorize accidents into "Fast Response" and "Delayed Response" and analyze the total number of Fatalities under each category using a Bar Chart.

**Task 7 : Create a Tableau Story on Road Accident Insights**
**Goal :** Build a **Tableau Story** highlighting key accident trends, causes, and insights. Include **story points** that help decision-making.