

# INSURANCE RISK & CLAIMS ANALYSIS

## BUSINESS REQUIREMENT

An insurance company is looking to better understand its **policyholder base and claim patterns** to make data-driven business decisions. Currently, policy and claims data are scattered across multiple sources, making it difficult for stakeholders to track performance and identify trends.

The company requires a **centralized interactive dashboard** in Power BI that can provide a clear overview of:

### **KPI's Requirements:**

1. **Total Policies** – to measure the size of the active customer base.
2. **Total Claim Amount** – to track the overall financial impact of claims.
3. **Claim Frequency** – to analyse how often claims are being made.
4. **Average Claim Amount** – to assess claim severity and potential risk exposure.
5. **Gender-wise Total Policies** – to understand customer distribution across genders for better segmentation and policy targeting.

### **Chart's Requirements:**

To **deep dive into the data**, we need to go beyond KPIs and analyse different aspects of insurance policies and claims. Charts help us **visually explore patterns, relationships, and anomalies** across customer demographics, car details, and claim behaviours. By analysing charts, stakeholders can **identify risk factors, understand customer segments, and optimize policy decisions**.

For this report, all visualizations are designed around **two key dynamic measures**:

- **Total Claim Amount**
- **Total Policies**

These measures provide the foundation to compare, filter, and segment the data effectively.

### Visualization Requirements:

- 1. By Car Use (Donut Chart)** – To analyse policy distribution and claim amounts based on how cars are being used (e.g., personal, commercial).
- 2. By Car Make (Bar Chart)** – To identify which car brands have higher policies and claims, highlighting brand-based risks.
- 3. By Coverage Zone (Donut Chart)** – To evaluate policies and claims by geographic zones, useful for regional risk analysis.
- 4. By Age Group (Frequency Chart/Histogram)** – To assess policyholders' age distribution and identify which age brackets file more claims.
- 5. By Car Year (Area Chart)** – To analyse how the car's age (year of manufacture) impacts policy counts and claim amounts.
- 6. By Kids Driving (Ribbon Chart)** – To compare the impact of young drivers in households on policy count and claim amounts.
- 7. By Education (Pie Chart)** – To understand how education levels correlate with insurance policy adoption and claims.
- 8. By Education & Marital Status (Matrix Heat Grid)** – To explore the combined effect of education and marital status on policies and claims, highlighting customer profiles.