**Insurance claims & Risk Analysis PowerBI Project**

1. **Project Title:**  
   **📊** **Insurance Claims & Risk Analysis Dashboard**

An interactive Power BI dashboard designed to analyze **insurance claims and risk patterns**, helping stakeholders understand claim severity, frequency, and customer segments across regions.

1. **Project Description / Purpose:**

This dashboard provides a **comprehensive overview of insurance claim data**, enabling insurers, analysts, and decision-makers to identify claim patterns, assess risk severity, and optimize policy management strategies.

1. **Tech Stack**  
   The dashboard was built using the following tools and technologies:

* **📊 Power BI Desktop** – Main data visualization platform used for report creation.
* **📂 Power Query** – Data cleaning and transformation
* **🧠 DAX (Data Analysis Expressions)** – For calculated measures and KPIs
* **📝 Data Modeling** --Relationships between policy, claims, and demographic data
* **📁 File Format** – .pbix for development, .pbit for template and .png for dashboard previews.

1. **Data Source**

**Dataset**: The dataset contains **insurance claims data**, including policy details, demographic attributes, and claim-related metrics. (Rooman Technologies Internship Project).

**Key fields include**:

* Policy Type (Full Coverage / Liability Only)
* Claim Severity (Low, Medium, High)
* Claim Frequency & Premium Amount
* Region (Urban, Suburban, Rural)
* Demographics (Age, Marital Status)
* Source of Lead (Agent, Online, Referral)

1. **Features:**

* ***Business Problem***
* *Insurance companies face challenges in identifying* ***high-risk customers****, understanding claim trends, and minimizing fraud. Raw claim records often fail to reveal actionable insights.*
* ***Goal of the Dashboard***

To provide a **visual, data-driven tool** that:

* + Tracks claim performance across severity and regions
  + Highlights risk factors by demographics (age, marital status, region)
  + Supports decision-making for pricing, risk management, and policy design
* ***Walkthrough of Key Visuals***
* ***Key KPIs (Top Cards):***
  + Total Claims: **1513**
  + Average Claims: **0.50**
  + Total Claims Adjusted: **113K**
  + Average Claim Amount: **74.59**
  + Claim Index: **3004**

***Claims by Severity (Bar Chart):***

*Shows distribution of Low (2113), Medium (586), and High (305) severity claims.*

***Claims by Region (Donut Chart):***

*Urban (1.49K), Suburban (0.92K), Rural (0.59K).*

***Claims Frequency vs Premium Amount (Scatter Plot):*** *Identifies the correlation between claim frequency and premium pricing.*

***Claims by Age & Severity (Histogram):*** *Tracks age-wise claim severity, helping identify high-risk age groups.*

***Claims Severity by Region (Stacked Area Chart):*** *Compares total severity distribution across regions.*

***Interactive Filters:*** *Users can filter by* ***Policy Type, Region, Source of Lead, Marital Status*** *for customized analysis.*

* ***Business Impact & Insights***
  + **Risk Profiling:** Identifies high-severity claims concentrated in specific regions and age groups.
  + **Policy Optimization:** Helps insurers design region/demographic-specific policies.
  + **Fraud Detection:** Correlation of claim frequency and premium outliers supports fraud detection.
  + **Customer Segmentation:** Provides insights on how marital status and region influence claim behavior.