POWER BI INSURANCE CLAIMS ANALYSIS DASHBOARD

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1. Introduction

The Insurance Claims Analysis Dashboard provides a comprehensive overview of insurance claim data to help the company monitor claim patterns, assess claim severity, and analyze customer demographics. The goal of this dashboard is to identify trends, improve decision-making, and optimize claim management processes.

2. Objective

- To analyze the total claims and their distribution across different severity levels.
- To understand regional trends in claim frequency and severity.
- To study the relationship between claim frequency and premium amount.
- To visualize demographic insights such as claim severity by age and marital status.

3. Tools and Technologies

- Tool Used: Power BI
- Data Source: Insurance claims dataset (CSV/Excel)
- Techniques Used: Data modeling, and Visualization design

4. Dataset Description

The dataset consists of records of insurance claims containing the following fields:

- Claim_ID: Unique identifier of each claim
- Policy_Type: Full Coverage or Liability-Only
- Region: Urban, Suburban, or Rural
- Claim_Severity: Low, Medium, High
- Age: Age of policyholder
- Marital_Status: Single, Married, Divorced, Widowed
- Claims_Frequency: Number of claims raised

- Premium_Amount: Amount paid for the policy
- Source_of_Lead: How the customer was acquired

5. Dashboard Components & Insights

a) KPIs (Top Cards)

- Total Claims: 4972
- Average of Claims: 0.50
- Total Claims Adjustment: 368K
- Total Records: 10K

These KPIs give a snapshot of the claim volume and adjustments handled by the company.

b) Count of Records by Claim Severity

Shows the distribution of claims based on severity:

- High: 7K
- Medium: 2K
- Low: 1K

Insight: Majority of claims fall under the *High* severity category.

c) Count of Records by Region

- Urban: 49.21%
- Suburban: 30.23%
- Rural: 20.56%

Insight: Most claims originate from urban areas.

d) Claims Frequency vs Premium Amount

This scatter plot shows how frequently customers file claims compared to their premium amounts.
Insight: Customers with higher premiums tend to have higher claim frequencies, indicating a correlation between risk and policy value.

e) Claims by Age and Severity

Displays the distribution of claim severity across age groups (binned).
Insight:

- Most claims are from individuals aged 30–50 years.
- The 40–60 age group shows more medium and high-severity claims.

f) Claim Severity by Region

- Urban: 3.5K high, 1K low
- Suburban: 2.1K high, 1K low
- Rural: 1.4K high

Insight: Urban areas have the highest number of high-severity claims.

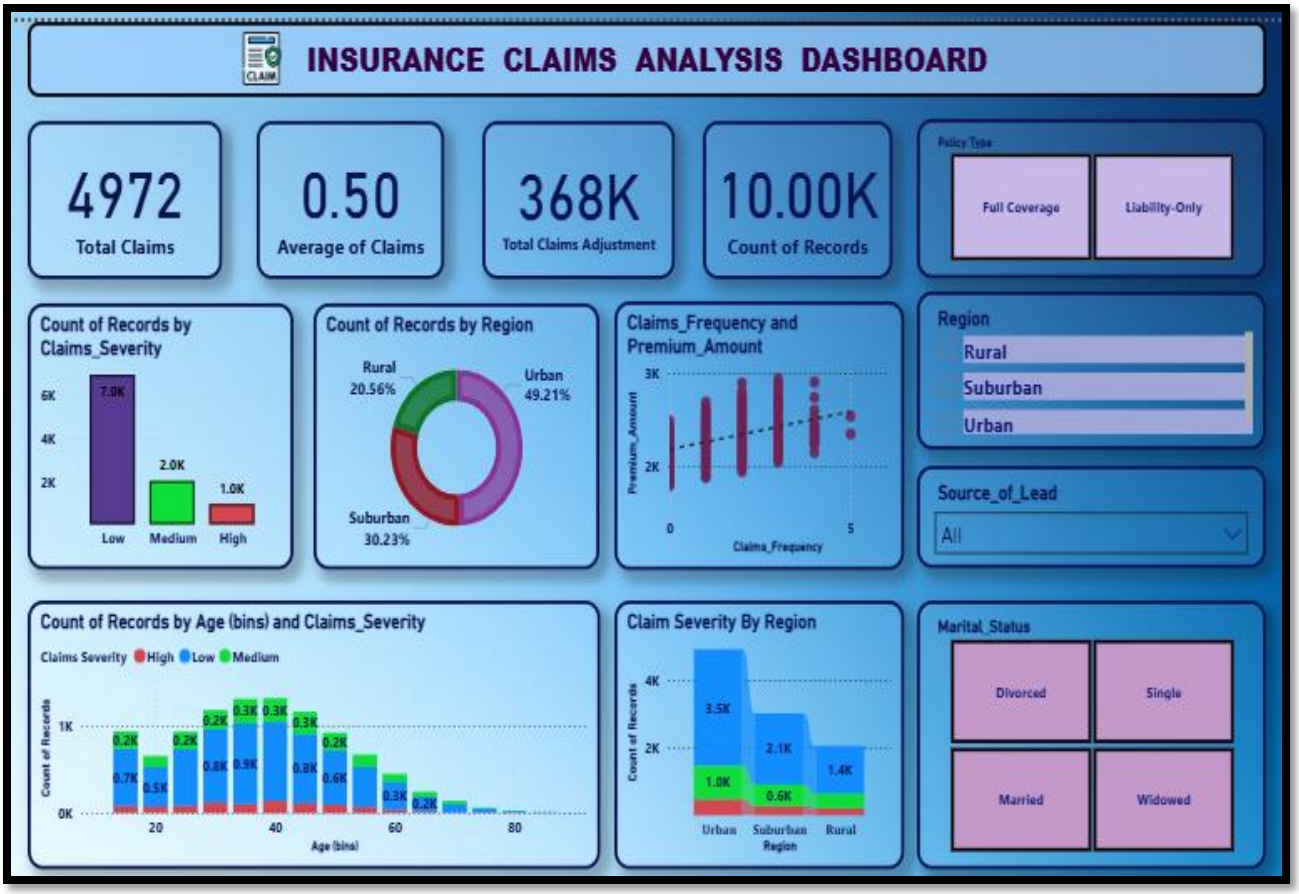
g) Filters

Interactive slicers allow filtering based on:

- Policy Type: Full Coverage / Liability-Only
- Region: Rural / Suburban / Urban
- Source of Lead: All lead channels
- Marital Status: Divorced / Single / Married / Widowed

6. Insights & Conclusions

- The highest number of claims come from urban regions.
- High-severity claims dominate across all regions.
- Middle-aged customers (30–50) contribute the most to claims.
- The relationship between premium amount and claim frequency helps identify high-risk customer groups.
- The dashboard provides valuable insights for risk assessment and targeted policy improvement.


INSURANCE CLAIMS ANALYSIS DASHBOARD
4972
Total Claims
0.50
Average of Claims
368K
Total Claims Adjustment
10.00K
Count of Records
Policy Type
Full Coverage
Liability-Only
Count of Records by Claims_Severity
7.0K
2.0K
1.0K
Low
Medium
High
Count of Records by Region
Rural 20.56%
Urban 49.21%
Suburban 30.23%
Claims_Frequency and Premium_Amount
Premium_Amount
Claims_Frequency
Region
Rural
Suburban
Urban
Source_of_Lead
All
Count of Records by Age (bins) and Claims_Severity
Claims Severity High Low Medium
Count of Records
Age (bins)
Claim Severity By Region
3.5K
2.1K
1.4K
1.0K
0.6K
Urban
Suburban
Rural
Region
Marital_Status
Divorced
Single
Married
Widowed