

Business Requirement Document (BRD)

Project Title: Insurance Premium & Claims Data Analysis

1. Business Overview

This dataset captures **insurance policy details, customer demographics, prior insurance history, claims data, and premium adjustments**. The goal is to develop **Pivot Tables and Dashboards** to analyze **premium distribution, claim patterns, customer acquisition channels, and conversion trends**.

2. Objectives

- Analyze premium variations based on **age, marital status, region, and policy type**.
 - Identify claim frequency and severity across different **customer segments**.
 - Examine the impact of **discounts (safe driver, bundling, multi-policy)** on premium **adjustments**.
 - Evaluate the effectiveness of **lead sources (agent vs. online)** on conversion rates.
 - Provide an interactive **dashboard** summarizing key business insights.
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3. Scope of Work

3.1 Data Preparation

- Clean and format the dataset (standardize categorical values, ensure consistency in numeric fields).
- Extract key fields such as **claims frequency, premium adjustments, discounts, and conversion metrics**.
- Categorize policyholders based on **age groups, marital status, and regions** for demographic analysis.

3.2 Pivot Table Analysis

The following **Pivot Tables** will be created:

1. Premium Distribution Analysis

- Average Premium Amount by Age, Region, Marital Status, and Policy Type.
- Impact of **Safe Driver, Multi-Policy, and Bundling Discounts** on Premium Adjustments.
- Comparison of Premium Adjustments by Credit Score and Region.

2. Claims Analysis

- Claims Frequency and Severity by Age Group, Marital Status, and Policy Type.

- Impact of **Prior Insurance Tenure** on Claims Frequency.
- Claims Adjustment Trends based on **Premium Amount and Discounts Applied**.

3. Conversion & Lead Source Analysis

- **Conversion Rate by Source of Lead (Agent vs. Online)**.
- **Time Since First Contact vs. Conversion Rate** correlation.
- **Number of Website Visits, Inquiries, and Quotes Requested** before Conversion.

4. Customer Segmentation Analysis

- Breakdown of **Policyholders by Region**.
 - **Senior vs. Non-Senior Policyholder Comparison** in Premium and Claims.
 - Customer segmentation based on **Time to Conversion & Credit Score Ranges**.
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4. Functional Requirements

4.1 Dashboard Elements

- **Premium Overview**
 - Average and Median Premium Amount.
 - Top factors influencing **premium adjustments**.
 - Premium comparison between **Urban and Suburban regions**.
- **Claims Trends**
 - Number of claims by **severity level**.
 - Claim frequency and adjustment trends over time.
 - High-risk groups based on **claims data**.
- **Conversion & Lead Analysis**
 - **Conversion Funnel Visualization** (from inquiry to final purchase).
 - **Effectiveness of Lead Sources** (Agent vs. Online).
 - Average **Time to Conversion** and impact of website interactions.

4.2 Visual Components

- **Bar Charts** for premium distribution across **age groups and regions**.
 - **Pie Charts** for discounts applied across different policies.
 - **Heatmaps** for claim severity and frequency trends.
 - **Line Graphs** for conversion trends over time.
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5. Success Metrics

- Improved understanding of **premium pricing and claim behavior**.
 - Identification of **high-risk policyholders** for proactive measures.
 - Data-driven insights to **optimize lead generation and conversion strategies**.
 - Enhanced **customer segmentation** for personalized policy recommendations
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6. Deliverables

- The Excel file should be structured for ease of use, with separate sheets for raw data, pivot tables, and the dashboard.
 - Visuals should be clear and user-friendly with conditional formatting for better readability.
 - Performance optimization should be considered to handle large datasets efficiently.
 - An Excel workbook must contain:
 - Cleaned and structured dataset
 - Pivot table reports
 - Interactive dashboard with slicers and charts
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