

# Customer Churn Analysis Report

## 1. Objective

The goal of this analysis is to understand the key factors influencing customer churn and identify patterns in churn behavior based on various customer demographics and service features.

## 2. Dataset Overview

- Dataset: Customer Churn.csv
- Total records: ~7,000+
- Key features:
  - Demographics: gender, SeniorCitizen, Partner, Dependents
  - Services: PhoneService, InternetService, OnlineSecurity, etc.
  - Contract & Payment: Contract, PaymentMethod, MonthlyCharges, TotalCharges
  - Target: Churn (Yes/No)

## 3. Exploratory Data Analysis (EDA)

### 3.1 Overall Customer Count

- Majority of customers did not churn.

### 3.2 Churn by Gender

- Similar churn rate between male and female customers.
- No major impact of gender on churn.

### 3.3 Churn by Senior Citizen

- Senior citizens have a higher churn rate.
- Indicates different service expectations or satisfaction levels.

### 3.4 Churn by Monthly Basis (Tenure or Monthly Charges)

- Shorter tenure or higher monthly charges linked to higher churn.

### 3.5 Churn by Service Usage

- Services: OnlineSecurity, OnlineBackup, TechSupport, StreamingTV, etc.
- Not using these services linked to higher churn.

### 3.6 Phone & Internet Service Impact

- Fiber optic internet and no phone service associated with higher churn.

### 3.7 Contract Type and Churn

- Month-to-Month contracts show highest churn.
- One and Two-year contracts show lower churn.

### 3.8 Payment Method

- Electronic check users had highest churn.
- Other payment methods show better retention.

## 4. Key Insights

- Senior citizens and high-paying customers are more likely to churn.
- Churn is higher among customers without value-added services.
- Month-to-month contracts and electronic check payments drive churn.
- Bundling services may help improve customer retention.

## 5. Recommendations

- Offer discounts or personalized plans for senior citizens.

- Promote yearly contracts with added benefits.
- Encourage adoption of value-added services like OnlineSecurity and TechSupport.
- Improve payment flexibility, especially for electronic check users.