**Executive Summary: Customer Churn Analysis**

This report investigates patterns behind customer churn, aiming to support strategic initiatives for improving retention. Visualizations in the notebook effectively illustrate the impact of customer demographics, service usage, and contractual behaviors on churn rates.

**Key Findings & Insights**

**1. Churn Overview**

* **26.54%** of the customer base has churned.
* This churn rate highlights a critical need to enhance customer engagement and reduce early exits.

**2. Demographics & Tenure**

* **Senior Citizens** show a disproportionately high churn rate:
  + **Churn Rate among Seniors**: ~**42%**
  + **Churn Rate among Non-Seniors**: ~**24%**
* **Tenure Impact**:
  + Customers with **1–2 months** of tenure churn at ~**45%**, indicating early dissatisfaction or onboarding issues.
  + Conversely, customers with **longer tenure (12+ months)** have a churn rate under **20%**, suggesting that loyalty increases over time.

**3. Contract Type**

* Customers on **month-to-month contracts** churn at a significantly higher rate:
  + **Churn Rate for Month-to-Month**: ~**43%**
  + **Churn Rate for 1-Year Contracts**: ~**11%**
  + **Churn Rate for 2-Year Contracts**: ~**3%**
* Encouraging longer-term commitments could drastically reduce churn.

**4. Services & Feature Usage**

* Lack of certain services correlates with higher churn:
  + **Without Online Security**: Churn ~**35%**
  + **Without Tech Support**: Churn ~**34%**
  + **Without Device Protection**: Churn ~**33%**
* These findings suggest that promoting these add-on services could boost retention by providing perceived value and support.

**5. Payment Method**

* Customers using **Electronic Check** are most likely to churn:
  + **Churn Rate for Electronic Check Users**: ~**45%**
  + In contrast, churn rates are lower for customers using **automatic payments (credit card/bank transfer)**, averaging under **20%**.
* This indicates that payment convenience and automation could be a retention lever.

**Recommendations**

* **Onboard new customers effectively** to reduce early tenure churn.
* **Encourage longer contract commitments** through loyalty benefits or discounted rates.
* **Promote essential services** (security, tech support) in bundles.
* **Switch electronic check users** to automated payment systems with added incentives.