Executive Summary: Customer Churn Analysis

This report explores the drivers behind customer churn using available customer data. The goal is to identify patterns and risk factors that lead to customer attrition and inform strategies for improving retention.

📊 Churn Overview

- **26.54%** of the customers in the dataset have churned.

- This indicates that roughly **1 in 4 customers** have left the service, which is a critical concern for business stability and growth.

👵 Demographic Factors: Senior Citizens

- Customers identified as **senior citizens** exhibit a **disproportionately higher churn rate** compared to other age groups.

- This suggests that senior users may face usability challenges or are less satisfied with the service, and may benefit from tailored support or engagement.

⌛ Tenure-Based Trends

- Customers with **tenure of just 1 or 2 months** represent a **significant share of those who churned**.

- On the contrary, **long-term users** show **much higher retention rates**, reinforcing that if a customer stays past the early months, they are more likely to remain loyal.

- This pattern implies a need to improve onboarding and early engagement strategies to reduce initial drop-offs.

📄 Contract Type Insights

- A **majority of churned customers are on month-to-month contracts**.

- Customers with **1-year or 2-year contracts** are substantially **less likely to churn**:

    - Month-to-month customers are **3–4 times more likely to churn** than those with longer-term contracts.

- This emphasizes the retention value of promoting longer-term commitments through incentives or bundled services.

💳 Payment Method Correlation

- A **notable churn pattern** is observed among users paying via **electronic check**, who churn **at higher rates** than those using credit cards, bank transfers, or mailed checks.

- This might be linked to customer demographics, digital payment comfort levels, or even service perceptions tied to payment convenience.

🔄 Data Preprocessing Notes

- Blank values in **Total Charges** were set to 0 for customers with **zero tenure**, ensuring accurate downstream analysis.

- **Senior Citizen** data was transformed from binary (0/1) to **Yes/No** to improve interpretability.