Executive Summary

● **Objective:**

The analysis aims to identify key drivers of customer churn by examining demographics, contract types, payment methods, tenure patterns, and service usage. Visualizations were used to understand how different features influence the likelihood of churn.

Key Insights:

Contract Type:

- Customers on **month-to-month contracts show the highest churn (~43%)**, significantly higher than those on **1-year (~12%)** and **2-year (~4%)** contracts.

- This highlights that **long-term contracts strongly reduce churn**, likely due to incentives, discounts, and higher commitment levels.

Payment Methods:

- Customers paying via **electronic check have the highest churn (~45%)**.

- Those using **automatic bank transfers or credit cards** show much lower churn (**15–18%**).

- This may indicate trust issues, billing convenience concerns, or cost differences linked to electronic check users.

Churn Rate by Tenure:

- Customers in their **first 1–2 months churn at over 50%**, the highest among all groups.

- Churn drops significantly for customers with **5+ years of tenure (<15%)**, showing strong loyalty once long-term relationships form.

- This emphasizes the need for **strong onboarding and early engagement strategies**.

Service Usage Insights:

- Customers without internet-based services (OnlineSecurity, TechSupport, OnlineBackup, StreamingTV, etc.) show **35–60% churn**, nearly **2–3× higher** than those who use these features.

- Subplots show consistent patterns: **low service engagement → high churn**.

Visualizations:

- Countplots, Stacked bar charts, and Pie chart clearly illustrate differences in churn across categories.

- Service-based subplots highlight that customers with limited or no value-added services churn significantly more.

- Tenure and contract type plots visually demonstrate the **sharp decline in churn** for long-term customers and committed contract users.

- The visual patterns strongly reinforce the analytical findings and guide targeted retention strategies.

Recommendations:

- Promote **long-term contract upgrades** through discounts or loyalty programs.

- Improve **onboarding for new customers** to reduce early churn.

- Encourage adoption of **value-added services** through bundles and personalized offers.

- Target high-risk groups such as **senior citizens** and **electronic-check users** with tailored support and communication.