Summary and Recommendations

Objective:

The analysis delves into the factors affecting customer attrition, with a particular emphasis on the impact of payment methods and contract types.

Key Insights & Findings:

Data Preparation:

- The dataset was cleaned by replacing blank values in the "TotalCharges" column with "0" and converting it to a float data type.

- The dataset contains no missing values or duplicate records, ensuring data integrity.

- The "SeniorCitizen" column was converted to a categorical variable for better readability.

Customer Churn Distribution:

- The visualization of customer churn status shows a significant number of customers have churned compared to those who have not.

Demographic Insights:

- A considerable proportion of senior citizens are present among the churned customers.
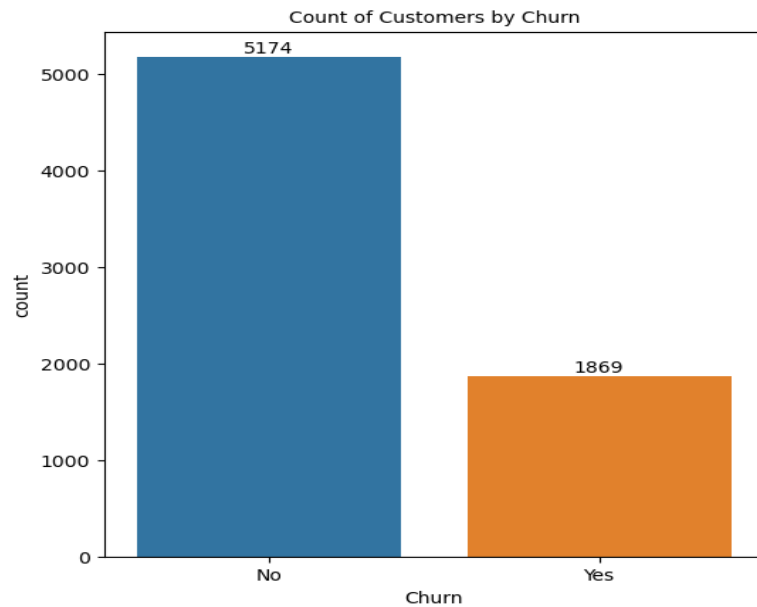
Contract Types:

- Customers with month-to-month contracts have higher churn rates compared to those with one or two-year contracts.

Payment Methods:

- Electronic check payments are more common among churned customers, indicating potential dissatisfaction with this payment method.
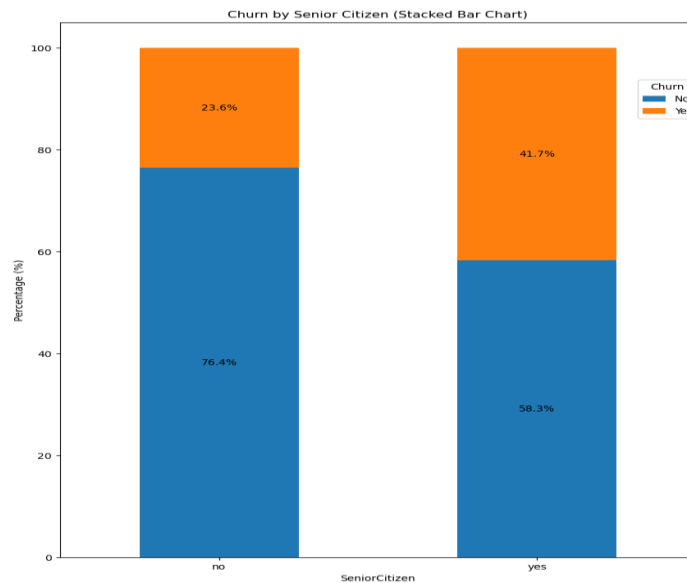
Visualizations & Data Insights:
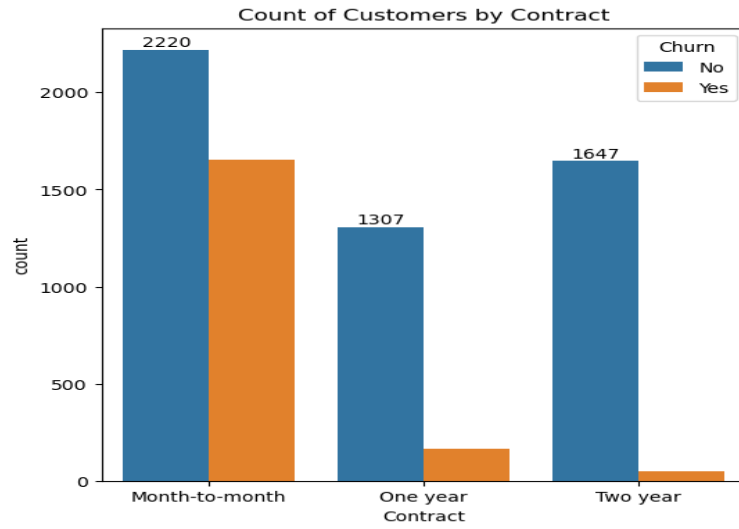
- ## **Count of Customers by Churn Status:**

Count of Customers by Churn

- ## Shows the distribution of churned vs. retained customers.

- ## **Churn Rate by Senior Citizen Status:**
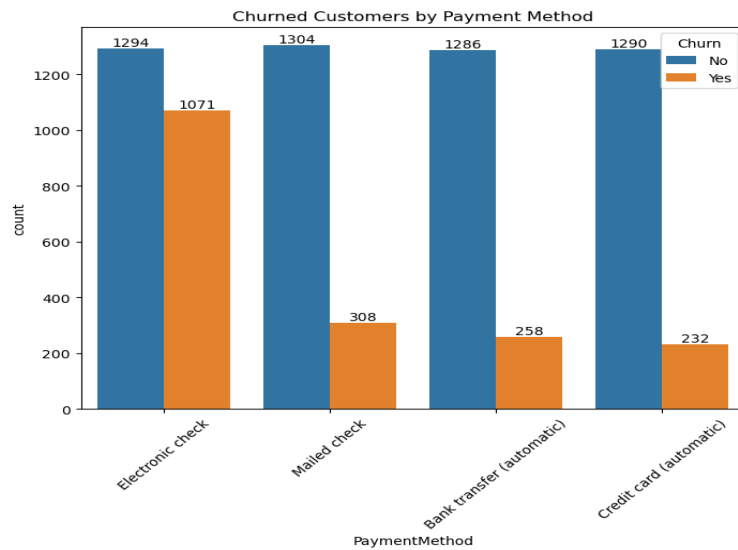
Churn by Senior Citizen (Stacked Bar Chart)

- ## Highlights the churn rate among senior citizens.

- **Churn Rate by Contract Type:**

- Compares churn rates across different contract types, emphasizing higher churn in month-to-month contracts.

- **Churn Rate by Payment Method:**

- Visualizes the churn rate for various payment methods, with electronic check showing the highest churn.

Recommendations:

Enhance Customer Experience for Senior Citizens:

Develop targeted retention strategies for senior citizens, such as personalized customer service and tailored product offerings.

Promote Long-Term Contracts:

Encourage customers to switch from month-to-month contracts to one or two-year contracts by offering incentives like discounts or added benefits.

Improve Electronic Payment Systems:

Investigate and address the issues with electronic check payments to reduce churn associated with this payment method.

Offer additional payment options or improve the existing electronic payment system for better customer satisfaction.

Customer Feedback and Support:

Implement a robust feedback mechanism to regularly gather customer insights and address their concerns promptly.

Enhance support for customers on month-to-month contracts and provide clear value propositions for upgrading to longer-term contracts.

Conclusions:

The analysis indicates that customer churn in the telecom industry is significantly influenced by contract type and payment methods. By focusing on improving customer experience for senior citizens, promoting long-term contracts, and addressing issues with electronic payment systems, the company can effectively reduce churn rates and enhance customer retention.