

Summary and Recommendations

This report presents a comprehensive analysis of customer churn within the dataset "Teco Customer Churn" which includes 7,043 customer records and 21 attributes. The analysis aims to identify key factors contributing to customer churn and visualize the findings through various charts.

Key Findings:

1. Churn Rate:
 - a. The overall churn rate is 26.54%, indicating that approximately 1,869 out of 7,043 customers have churned.
2. Churn by Gender:
 - a. The analysis reveals that churn rates vary by gender, with a notable difference in the number of churned customers between males and females.
3. Senior Citizens:
 - a. A significant observation is that senior citizens have a higher churn rate compared to non-senior citizens. This demographic shows a greater tendency to leave the service.
4. Tenure Analysis:
 - a. Customers with shorter tenure (2-3 months) exhibit higher churn rates, while those with longer tenure (over 55 months) tend to remain loyal. This suggests that customer retention strategies should focus on early engagement.
5. Contract Type:
 - a. Customers with month-to-month contracts are more likely to churn compared to those with one or two-year contracts. This highlights the importance of contract length in customer retention.
6. Service Subscriptions:
 - a. Features such as Online Security, Tech Support, and Device Protection show a significant drop in customer retention when not subscribed. Customers without Internet Service or Phone Service also exhibit lower churn rates, indicating that additional services may enhance customer loyalty.

7. Payment Method

- a. The analysis indicates that customers using Electronic Check as a payment method are more likely to churn. This suggests a potential area for further investigation into payment preferences and their impact on customer retention.

Visual Insights:

1. Churn Distribution:
 - A pie chart illustrates the percentage of churned customers, clearly showing that 73.46% of customers have not churned, while 26.54% have.
2. Churn by Gender:
 - A count plot demonstrates the distribution of churned customers by gender, providing insights into demographic trends.
3. Churn by Senior Citizen Status:
 - A count plot highlights the churn rates among senior citizens, emphasizing the need for targeted retention strategies for this group.
4. Tenure Histogram:
 - A histogram visualizes the relationship between customer tenure and churn, indicating that customers with shorter tenures are more likely to leave.
5. Contract Type Analysis:
 - A count plot shows the distribution of churned customers by contract type, reinforcing the finding that month-to-month contracts correlate with higher churn rates.
6. Service Subscription Impact:
 - Multiple count plots illustrate the impact of various service subscriptions on churn rates, indicating that lack of additional services leads to higher churn.
7. Payment Method Analysis:
 - A count plot reveals the relationship between payment methods and churn, highlighting the higher churn rates associated with Electronic Check payments.

Recommendations:

The analysis of customer churn reveals critical insights that can inform strategic decisions aimed at improving customer retention. By focusing on the identified factors such as contract length, service subscriptions, and payment methods, the organization can develop targeted strategies to reduce churn rates and enhance customer loyalty. Further investigation into the reasons behind the higher churn rates among senior citizens and customers using Electronic Check is recommended to tailor retention efforts effectively.