

Summary and Recommendations

1. Churn Overview:

- A pie chart reveals that **26.54%** of customers have churned, which is a notable portion. Retention efforts directed at understanding this 26.54% could be beneficial in reducing churn.

2. Demographic Insights:

- **Gender:**
 - Analysis of churn by gender indicates that **male and female customers churn at relatively similar rates**. This suggests that gender alone is not a primary factor in churn risk, and other variables may be more influential.
- **Senior Citizen Status:**
 - Senior citizens demonstrate a considerably higher likelihood of churn compared to non-senior customers. Among senior citizens, about **41% have churned**, whereas only **23% of non-senior customers** have done so. This disparity underscores the need for tailored strategies to engage senior customers effectively and improve their retention.

3. Tenure and Churn:

- The analysis of customer tenure, visualized with a histogram, shows that **customers with shorter tenures (e.g., less than a year)** are more prone to churn. In contrast, customers with longer tenures are less likely to leave. Specifically, **over 30% of customers with tenures below six months** have churned, while **tenure beyond two years correlates with a reduction in churn likelihood to under 15%**. This trend suggests the importance of reinforcing engagement and satisfaction during the early stages of the customer lifecycle.

4. Additional Observations:

- Certain service-related attributes, such as **Total Charges, Monthly Charges**, and payment type, might also show correlations with churn. For example, customers with higher monthly charges tend to have a slightly elevated churn rate, indicating potential pricing sensitivity among certain customer segments.

Recommendations

Based on these insights, targeted strategies can be developed:

- **Retention Initiatives for Senior Citizens:** Considering their elevated churn rates, creating personalized support and outreach programs may enhance retention among senior customers.
- **Early Engagement for New Customers:** Implementing engagement tactics for customers within their first year can mitigate early-stage churn.
- **Price Sensitivity Analysis:** Further exploring price sensitivity and alternative pricing models for customers with higher monthly charges may prevent churn in this segment.

