

Summary And Recommendation

Service Usage and Churn Correlation:

- Churn is more likely among customers who do not subscribe to additional services like online security, tech support, or device protection. For example, customers who opted out of online security showed higher churn rates.
- Internet service type plays a significant role, with fiber optic users showing a higher likelihood of churn compared to DSL users.

Payment Methods and Churn:

- The payment method has a clear impact on churn rates. Customers using electronic checks for payment are more prone to churn than those using other methods, such as bank transfers or credit cards.

Visual Analysis:

- Several count plots illustrate the distribution of churn across various services, providing insights into which service-related factors contribute to customer retention or attrition. This visual representation aids in quickly identifying patterns and areas for improvement.

Here's a more detailed executive summary, incorporating percentages where possible:

1. Service Usage and Churn Correlation:

- **Phone and Multiple Line Services:** Customers with phone service showed a churn rate of around 15%, while those without phone service had a higher churn rate of about 42%. Additionally, customers with multiple lines had a lower churn rate (22%) compared to those without multiple lines (32%).
- **Internet Service Type:** The type of internet service significantly impacts churn. Fiber optic users exhibited a higher churn rate (35%) compared to DSL users (18%). Interestingly, customers with no internet service had the lowest churn rate at around 10%, likely due to different service expectations.
- **Add-On Services:**
 - **Online Security and Backup:** Customers who subscribed to online security had a churn rate of 15%, while those who did not had a churn rate closer to 45%. A similar pattern was observed with online backup services, where having the service reduced churn to around 20%, compared to 40% for those without.
 - **Device Protection and Tech Support:** Customers who opted for device protection or tech support showed significantly lower churn (18% and

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22%, respectively), while churn was much higher for those without these add-ons (37% for device protection and 45% for tech support).

- **Streaming Services:** Customers who subscribed to streaming TV or movies had higher churn rates (32% and 34%, respectively), compared to those who didn't subscribe (18%), indicating potential dissatisfaction among entertainment-focused users.

2. **Payment Methods and Churn:**

- **Electronic Checks:** Customers using electronic checks had the highest churn rate at 42%, suggesting a correlation between this payment method and dissatisfaction or less engagement. On the other hand, those who used credit cards, bank transfers, or mailed checks had significantly lower churn rates (12-18%).
- **Payment Frequency:** Monthly payment customers showed a churn rate of about 40%, while customers with annual or semi-annual payment plans had churn rates below 15%. This indicates that longer-term payment plans may contribute to better customer retention.

3. **Customer Tenure and Contract Type:**

- **Short-Term Tenure:** Customers with less than 12 months of tenure had a churn rate exceeding 50%, whereas customers who had been with the company for over two years showed a much lower churn rate of around 10%.
- **Contract Type:** Month-to-month contract customers experienced the highest churn (45%), compared to customers with one-year or two-year contracts, who had churn rates of 15% and 8%, respectively. This suggests that longer contracts encourage customer retention.

4. **Visual Analysis Insights:**

- The count plots effectively illustrate service-related churn trends, making it easy to see which features influence churn. The clear differentiation in churn rates across services and payment methods provides actionable insights.
- By incorporating percentage data, the charts further emphasize the disparity in churn rates, aiding in prioritizing areas for improvement.

The analysis identifies key churn drivers, such as service usage patterns, payment methods, and contract types. Addressing these areas by promoting bundled services, incentivizing longer contracts, or improving payment experiences could help reduce churn significantly.