

Summary

This project analyzes customer churn behavior to identify the most important drivers influencing customer retention and attrition. Through exploratory data analysis and well-structured visualizations (countplots and distributions), clear patterns emerge across customer demographics, tenure, contract type, service usage, and payment behavior.

Overall Churn Overview

- The overall churn rate is approximately 26–27%, meaning about 1 in every 4 customers leaves the service.
 - This level of churn represents a significant revenue risk and highlights the need for targeted retention strategies.
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Key Insights (with Percentages)

1. Senior Citizen Impact

- Senior citizens show a noticeably higher churn rate (~40%+) compared to non-senior customers (~23–25%).
- Although senior citizens form a smaller portion of the customer base, they contribute disproportionately to churn.

Implication:

Customized plans, better customer support, and simplified services could reduce churn in this segment.

2. Tenure vs Churn

- Customers with 1–2 months of tenure show the highest churn rate (~45–50%).
- Churn steadily declines as tenure increases.
- Customers with tenure above 24 months have churn rates below 10%.

Implication:

The first few months are critical. Strong onboarding, early engagement, and welcome offers can significantly reduce early churn.

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3. Contract Type

- Month-to-month contracts account for ~55–60% of total churned customers.
- Customers with:
 - One-year contracts show churn of roughly 10–12%
 - Two-year contracts show the lowest churn (<5%)

Implication:

Encouraging long-term contracts through discounts or bundled services can drastically improve retention.

4. Value-Added Services Usage

Customers without additional services show consistently higher churn:

- Online Security – ~40% churn when not subscribed
- Tech Support – ~38–40% churn when absent
- Device Protection & Online Backup – ~35–38% churn

Customers who use these services generally have **churn rates below 15%**.

Implication:

These services act as **strong retention levers**. Bundling or promoting them early can increase customer stickiness.

5. Internet & Streaming Services

- Customers with **Fiber Optic internet** show **higher churn (~30%+)** compared to DSL users.
- Customers without **Streaming TV or Streaming Movies** churn more frequently than those who use these services.

Implication:

Service quality, pricing, or expectations around fiber connections should be reviewed.

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6. Payment Method

- Customers using **Electronic Check** show the highest churn (~45%).
- Automatic payment methods (credit card or bank transfer) show much lower churn (~15–18%).

Implication:

Encouraging **auto-pay options** can help reduce churn and improve payment reliability.

Business Recommendations

- Focus on **early-tenure retention programs** (first 90 days).
 - Promote **long-term contracts** with incentives.
 - Bundle **Online Security, Tech Support, and Backup services**.
 - Improve engagement strategies for **senior citizens**.
 - Migrate customers from **electronic checks** to **automated payment methods**.
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Conclusion

The charts and visual analysis clearly demonstrate that churn is **not random**—it is strongly influenced by tenure, contract type, service adoption, and payment behavior. By acting on these insights, the organization can **significantly reduce churn, increase customer lifetime value, and stabilize revenue growth**.