

Executive Summary: Telco Customer Churn Analysis

Churn Overview

Out of the total customer base, 26.5% of customers have churned, while 73.5% have remained.

This was visualized using a countplot to show absolute churn numbers and a pie chart to highlight the percentage distribution.

Insight: Churn is a significant issue, affecting more than 1 in 4 customers, warranting targeted retention strategies.

Demographic Analysis

Gender:

- Male Churn Rate: ~26.2%
- Female Churn Rate: ~26.9%

Interpretation: Gender is not a strong predictor of churn.

Senior Citizen Status:

- Senior Citizen Churn Rate: 41.7%
- Non-Senior Churn Rate: 24.0%

Insight: Senior customers are nearly twice as likely to churn compared to non-seniors.

Tenure vs. Churn

Customers with tenure < 6 months have a churn rate over 50%.

Those with tenure > 40 months have churn rates below 10%.

Insight: Early-stage customers are at the highest risk of churn. Strong onboarding and early engagement could reduce churn.

Contract Type and Churn

- Month-to-month: 43.9% churn rate
- One-year: 11.5%

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- Two-year: 2.7%

Insight: Short-term contracts are a major churn driver. Lock-in contracts correlate with strong customer retention.

Service Features - Detailed Subplot Analysis

A grid of 3x3 subplots examined churn behavior across 9 service types.

Key insights:

- InternetService: DSL (19%), Fiber (42%), No service (<10%)
- OnlineSecurity & TechSupport reduce churn (~15% with them vs. ~35-40% without)
- Streaming services only help when bundled with security features.

Insight: Customers with internet but no protection add-ons are more likely to churn. Bundled value-add services reduce churn risk.

Payment Method and Churn

- Electronic check: ~45.5% churn rate
- Credit card: ~15.3%
- Bank transfer: ~16.7%
- Mailed check: ~19.2%

Insight: Customers using electronic checks are most likely to churn. This may signal financial instability or low tech adoption.

Strategic Implications

Based on these findings, the company can prioritize:

1. Retention Programs for month-to-month and new customers (<6 months).
2. Bundling of services like OnlineSecurity, TechSupport.
3. Incentives to shift payment methods toward credit cards and bank transfers.
4. Senior-focused loyalty programs or engagement strategies.