

# Customer Churn Analysis Report

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October 19, 2025

## Executive Summary

The primary goal of this analysis was to identify and quantify the demographic, contract, and service-related factors that most strongly correlate with customer churn, enabling the development of targeted retention strategies.

The dataset shows that the overall churn rate is **26.54%** (1,869 out of 7,043 customers). This high baseline rate indicates an urgent need for intervention across multiple customer segments.

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## Key Insights & Data-Driven Findings

### 1. Contract Type is the Primary Churn Driver

The type of contract a customer holds is the most critical factor influencing their likelihood to churn, highlighting the power of commitment length in retention.

- **Month-to-Month:** This contract type accounts for the highest volume and highest rate of churn, with a churn rate of approximately **42.7%** (1,655 churn / 3,875 total customers).
- **Long-Term Contracts:** These demonstrate significant retention power:
  - One-Year Churn Rate: Approximately **11.2%**.
  - Two-Year Churn Rate: A minimal **2.8%**.
- **Tenure Distribution:** The analysis shows that month-to-month customers are concentrated at low tenures, while longer contracts successfully extend the customer tenure (peaking around 60–72 months).

### 2. Payment Method Represents Significant Risk

A specific payment method, Electronic Check, presents a disproportionately high risk for customer attrition.

- **Electronic Check:** This method has the highest absolute number of churned customers, with an approximate churn rate of **46.7%**. This suggests potential issues related to user experience, security perceptions, or transaction failures associated with this gateway.
- **Other Methods:** Bank transfer, Credit card, and Mailed check methods show significantly lower churn volumes, reinforcing that the payment mechanism itself is a primary factor.

### 3. Senior Citizens are a Vulnerable Demographic

Demographic analysis reveals that senior customers are far more likely to churn than the non-senior segment.

- **Senior Citizen Churn Rate:** The data shows that **41.7%** of senior citizens churn.
- **Non-Senior Churn Rate:** In contrast, only **23.6%** of non-senior customers churn.
- **Implication:** This **18.1 percentage point difference** highlights the need for dedicated and specialized support or tailored product offerings for this specific demographic.

### 4. Internet Service and Charges Correlation

Service type and monthly cost are also correlated with churn risk.

- **Fiber Optic Risk:** Customers using Fiber Optic who churn generally have very high Monthly Charges (median around \$95-\$100).
  - **General Charges Trend:** Across all services, customers who churn tend to have higher monthly charges than those who are retained. This suggests a perceived poor value-for-money proposition for high-cost services, regardless of the technology used.
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## Recommendations

Based on the quantitative insights, the following four strategies are recommended for immediate implementation:

Recommendation	Priority	Supporting Data and Action
<b>1. Aggressive Contract Promotion</b>	High	<p>Month-to-month churn is <b>42.7%</b> vs. two-year churn at <b>2.8%</b>.</p> <p><b>Action:</b> Introduce compelling incentives (e.g., discounted rates, free add-ons) to migrate month-to-month customers to one-year or two-year contracts, focusing on this conversion within the first 6 months of tenure.</p>
<b>2. Audit Electronic Payment Method</b>	High	<p>Electronic Check users churn at approximately <b>46.7%</b>.</p> <p><b>Action:</b> Investigate the Electronic Check payment gateway for user experience, security perceptions, and failure rates. Proactively encourage high-risk customers to switch to automatic Credit Card or Bank Transfer methods through small discounts or service credits.</p>
<b>3. Targeted Senior Citizen Retention</b>	Medium	<p>Senior Citizen churn is <b>41.7%</b> vs. Non-Senior churn at <b>23.6%</b>.</p> <p><b>Action:</b> Develop a tailored support program (e.g., dedicated support line, simplified billing/service guides) and personalized value offers for senior customers to improve satisfaction and reduce attrition in this high-risk segment.</p>
<b>4. Enhance Fiber Optic Value</b>	Medium	<p>Fiber Optic customers, particularly those with high charges, show high churn risk.</p> <p><b>Action:</b> Conduct customer satisfaction surveys focused on Fiber Optic users to pinpoint the source of dissatisfaction (e.g., reliability, speed consistency). Ensure the perceived value justifies the higher monthly cost.</p>