

Summary and Recommendation

This report presents an analysis of **customer churn** in a telecom dataset consisting of **7,043 customer records** with **21 key attributes**, including demographic information, service subscriptions, contract details, and payment methods. The primary objective is to identify patterns and factors influencing customer churn and provide actionable recommendations to improve retention rates.

Key Findings

1. Churn Rate Overview

- **26.54%** of customers have **churned** (discontinued the service), while **73.46%** have remained.
- A significant portion of churned customers had **shorter tenure** and **month-to-month contracts**, indicating potential dissatisfaction in early stages.

2. Churn by Customer Demographics

- **Senior Citizens are at a higher risk of churn:**
 - **42.0%** of senior citizens have churned, compared to **23.1%** of non-senior citizens.
- **Customers with dependents are more likely to stay:**
 - **19.3%** churned among those with dependents, versus **31.3%** for those without.

3. Tenure & Customer Retention

- **Short-term customers (1-6 months): 65.5%** churned.
- **Long-term customers (more than 24 months):** Only **10.1%** churned.
- This indicates that the first few months are **critical** for customer retention.

4. Impact of Contract Type

- **Month-to-month contracts have the highest churn rate at 43.6%.**
- **One-year contracts have a churn rate of 11.7%,** showing better stability.
- **Two-year contracts have the lowest churn rate of just 3.7%,** indicating strong retention.
- Customers on **long-term contracts** are significantly more likely to remain.

5. Influence of Internet & Additional Services

- **Churn is higher among customers with no additional services** (e.g., security, tech support).
- **Customers with fiber optic internet have a churn rate of 41.2%,** while DSL users have a lower rate at **18.5%.**

- **Streaming services alone do not significantly impact churn**, but those without security add-ons are more likely to leave.

6. Billing & Payment Impact

- **Paperless billing users have a churn rate of 33.6%**, compared to **20.2%** for those receiving paper bills.
- **Electronic check payment users have the highest churn rate (45.9%)**, while **bank transfers and credit card autopay users have the lowest churn (14.1%)**.

Visual Insights

The report contains multiple **charts and visual representations** illustrating:

- **Churn distribution across different demographics**
- **Tenure-based churn trends**
- **Contract types and their impact on retention**
- **Billing methods and their correlation with churn**

Recommendations

- **Early Retention Strategies:**
 - Implement **onboarding programs** for customers in their **first 3-6 months** to enhance satisfaction.
 - Offer **personalized incentives** for new users to encourage long-term engagement.
- **Encourage Long-Term Contracts:**
 - Provide discounts or loyalty rewards for **1-year and 2-year contracts** to reduce churn.
- **Improve Senior Citizen Support:**
 - Introduce **dedicated customer support** for senior citizens to improve retention.
- **Optimize Billing & Payment Methods:**
 - Encourage **automatic payments via bank transfers or credit cards** by offering incentives.
 - Address issues related to **paperless billing dissatisfaction** by improving communication.
- **Enhance Additional Services:**
 - Promote **bundled packages with security, tech support, and additional features** to improve customer engagement.