

# Summary – Telecom Customer Churn Analysis

This project explores the factors driving customer churn in a telecom service provider's customer base. Using visual and statistical analysis, key behavioral and demographic patterns have been uncovered to help inform customer retention strategies.

## Overall Churn Rate:

- The **overall churn rate is 26.54%**, indicating that over **1 in 4 customers** leave the service, which is a significant area of concern for the business.

## Gender-Based Churn Distribution Summary:

- **Male and female** customers churn **at nearly equal** rates, suggesting gender is not a significant standalone driver of churn.

## Demographics & Churn:

- **Senior Citizens** are more likely to churn than younger customers. While exact numbers weren't provided, the visual suggests a **churn rate exceeding 40%** among senior citizens compared to a much lower rate for non-seniors.
- This highlights the need for better service or targeted benefits for elderly customers.

## Tenure & Churn Behavior:

- **Short-tenure customers (1–2 months)** exhibit the highest churn, with rates potentially around **50–60%**.
- Conversely, **long-tenure customers** (those subscribed for over a year) show strong loyalty and low churn rates, often **below 10%**.
- This emphasizes the importance of early-stage customer engagement and satisfaction.

## Contract Type Influence:

- Customers with **month-to-month contracts** have a **churn rate of ~43%**.
- In contrast, customers on **one-year contracts** show a churn rate around **11%**, and **two-year contract holders** churn at an even lower rate, close to **3%**.

- Promoting longer-term contracts could significantly reduce churn.

### Service Features & Churn:

- Churn is lower among customers using:
  - **Phone Service**
  - **Internet Service (especially DSL)**
  - **Online Security**
- For instance, customers **with Online Security enabled churn at under 15%**, whereas those without it may churn at rates **above 40%**.
- Absence of services like **Online Backup, Tech Support, and Streaming TV** is correlated with higher churn, suggesting these features may be perceived as valuable.

### Payment Method Impact:

- The **Electronic Check** payment method is strongly associated with churn, with a **churn rate exceeding 45%**.
- Other methods like **Bank Transfers or Credit Cards** show much **lower churn rates (~15–20%)**, implying a behavioral or satisfaction link with billing preferences.

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## Conclusion:

This analysis highlights that churn is strongly influenced by contract length, service usage, and tenure. Strategies such as improving onboarding for new users, bundling valued services, and incentivizing long-term contracts can significantly improve retention.

## Key Recommendations to Reduce Churn

1. **Engage New Customers Early**
  - Focus on the first 2 months with onboarding, support, and incentives.
2. **Promote Long-Term Contracts**

- Offer discounts or perks to shift users from monthly to yearly plans.

### **3. Bundle Valuable Services**

- Include Online Security, Tech Support, etc., to increase stickiness.

### **4. Discourage Electronic Check Payments**

- Offer rewards for switching to credit card or bank transfer.

### **5. Target Senior Citizens Strategically**

- Provide simplified plans and personalized support.
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