

# Telecom Customer Churn – Summary Report

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This report summarizes the key findings from the Exploratory Data Analysis (EDA) performed on the Telecom Customer Churn dataset. The goal of the analysis is to understand **why customers churn**, identify the **high-risk segments**, and provide **actionable recommendations** to reduce churn.

The EDA included data cleaning, feature transformation, and visual exploration across demographics, service usage, tenure, contract type, and payment methods.

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## 1. Churn Overview

### ✓ Total Churn Percentage

Based on the churn pie chart:

- ◇ **26.54% of customers have churned**
- ◇ **73.46% have stayed**

This indicates that **more than 1 in 4 customers leave the company**, which is significantly high for a subscription-based industry.

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## 2. Demographic Insights

### 2.1 Gender

- Male and female churn rates are almost identical.
    - ⚠ **Gender does NOT significantly influence churn.**
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## 2.2 Senior Citizen Status

Charts indicate:

- Senior citizens have a **much higher churn rate** compared to younger customers.
- A disproportionately large percentage of senior customers leave.

 **Senior Citizens = High Churn-Risk Segment**

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## 3. Tenure (Customer Lifetime)

Histogram analysis shows:

- Customers with **shorter tenure (1–2 months)** have the **highest churn percentage**.
- Longer-tenure customers are **more loyal** and churn much less.

 **Low-tenure customers = Very high churn**

This indicates onboarding and early-experience issues.

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## 4. Contract Type

Count plots show:

- **Month-to-month customers churn the most.**
- **1-year and 2-year contract customers churn significantly less.**

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Percentage trend:

- Month-to-month → **Highest churn**
- One-year → moderate churn
- Two-year → **Lowest churn**

 **Short-term contracts = High churn segment**

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## 5. Internet Services & Add-Ons

The multi-plot service analysis highlights:

**Customers with:**

- ✗ Internet service but no online security
- ✗ Internet service but no tech support
- ✗ Multiple internet-related services without add-on protection

...show **significantly higher churn percentages.**

 **Lack of security / support add-ons strongly correlates with churn**

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## 6. Payment Method

- Customers using **Electronic Check** have the **highest churn percentage.**
- Customers paying via **Credit card, Bank transfer, or Automatic payment** churn less.

 **Electronic check = high-risk payment method**

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## 7. Other Findings

- Higher Total Charges generally correlate with lower churn (loyal long-term customers).
  - Customers with multiple issues (billing, service quality, lack of add-ons) are more likely to churn.
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## Conclusion

Based on the EDA:

### ◇ **26.54% of total customers churned**

A major churn issue exists and needs strategic attention.

### ◇ **Senior citizens churn significantly more than younger customers**

This segment is more vulnerable and requires additional support.

### ◇ **Customers with 1–2 months of tenure are the most likely to churn**

Early customer experience is a major weakness.

### ◇ **Month-to-month contract customers show the highest churn**

Lack of long-term commitment increases the probability of leaving.

### ◇ **Customers using Electronic Check have much higher churn**

Likely due to inconvenience or payment failures.

### ◇ **Internet users without security or tech-support add-ons churn at high rates**

Missing add-on services contribute heavily to dissatisfaction.

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## Business Recommendations

### **1. Improve Early-Tenure Support (First 2–3 Months)**

- Provide welcome calls, onboarding assistance, and early-experience check-ins.
- Offer temporary discounts or trial add-ons.

### **2. Encourage Long-Term Contracts**

- Offer contract-upgrade discounts.
- Add loyalty points for customers switching to 1- or 2-year contracts.

### **3. Target Senior Citizens with Dedicated Support**

- Simplify plans
- Provide special senior-support helplines
- Offer tech-support bundles

### **4. Promote Add-On Services**

- Upsell online security and tech support bundles.
- Offer discounted add-on packages for new customers.

### **5. Reduce Electronic Check Payments**

- Promote auto-payment options through discounts or rewards.
- Provide easy migration away from electronic check billing.

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## 6. Strengthen Internet Service Quality

- Prioritize reliability improvements.
  - Offer compensation or upgrades for customers facing repeated service issues.
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## Final Takeaway

The top contributors to churn are:

- Month-to-month contracts
- Electronic check payments
- Short tenure (1–2 months)
- Senior citizen customers
- Internet customers without add-on support

With **26.54% churn**, the telecom company must strategically focus on improving early customer experience, expanding contract plans, and promoting add-ons that reduce dissatisfaction.

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## For Questions or Discussion

I would be happy to connect and discuss the analysis further.

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