



# Customer Churn Analysis



## Objective

The analysis aims to identify patterns and drivers behind customer churn using demographic data, service usage, tenure, and payment methods. These insights help guide strategic actions to improve customer retention and satisfaction.

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## Key Insights

### 1. Churn Overview

- Out of the entire customer base, **26.5%** have churned, while **73.5%** have remained.
  - This churn rate is relatively high, implying a substantial loss in revenue and customer lifetime value if not addressed promptly.
  - **Visuals Used:** Count plot & pie chart highlighted this imbalance clearly.
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### 2. Demographic Analysis


#### a. Gender-Based Churn

- Churn is **evenly distributed** across genders:
  - **Female:** ~26.9% churned
  - **Male:** ~26.1% churned
- 📌 *Conclusion:* **Gender is not a significant factor** in customer churn.


#### b. Senior Citizens

- **42.3%** of senior citizens have churned, compared to **24.1%** of non-senior citizens.
  - 📌 *Conclusion:* **Senior citizens are nearly twice as likely** to churn and may require dedicated support or targeted retention efforts.
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### 3. Tenure Analysis

- Customers with **less than 12 months** of tenure show the **highest churn rate**.
  - Churn decreases significantly with longer tenure:
    - **0–12 months**: ~52% churn rate
    - **13–24 months**: ~20%
    - **>24 months**: ~11%
  -  **Conclusion**: The **first year is critical** in retaining customers. Onboarding, early support, and perceived value must be optimized.
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### 4. Contract Type

- Churn by contract type:
    - **Month-to-Month**: ~43.9%
    - **One-Year**: ~11.5%
    - **Two-Year**: ~2.8%
  -  **Conclusion**: Customers with **month-to-month contracts** are **over 15x more likely to churn** than those with two-year contracts.
  - **Retention strategies should focus on transitioning month-to-month customers to long-term plans.**
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### 5. Service Subscription Impact

Churn is noticeably higher among customers **not using certain services**:

- **No Online Security**: 42.1% churn vs. 15.3% with security
- **No Tech Support**: 41.1% churn vs. 14.8% with support
- **No Device Protection**: 38.3% churn vs. 16.4% with protection


 **Conclusion:** The **absence of key support services correlates with higher churn**. Bundling or upselling these features may improve retention.

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## 6. Payment Method

Churn distribution across payment methods:

- **Electronic Check:** ~45.3% churn
- **Mailed Check:** ~19.6%
- **Bank Transfer (AutoPay):** ~14.7%
- **Credit Card (AutoPay):** ~15.1%

 **Conclusion:** Customers using **electronic check are over 3x more likely to churn** than those on autopay methods. This could be linked to flexibility, billing issues, or demographic preferences.

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## Strategic Recommendations

1. **Boost onboarding and engagement efforts in the first 6–12 months** to build stronger early relationships.
2. **Encourage long-term contracts** through discounts, loyalty benefits, or exclusive service bundles.
3. **Upsell value-added services** like Online Security, Backup, and Tech Support, especially to vulnerable segments.
4. **Audit and improve the electronic check payment process** or incentivize customers to switch to auto-pay options.
5. **Design senior-focused support and retention initiatives**, as this group has a disproportionate churn rate.