

Executive Summary: Customer Churn Analysis

Data Cleaning & Preparation

- 'TotalCharges' column cleaned and converted to float.
- 'SeniorCitizen' column mapped from 0/1 to 'yes'/'no'.
- No duplicates or null values were found.

Churn Rate Overview

- 26.54% of customers have churned.
- Shown using bar and pie charts.

Detailed Churn Analysis

By Gender:

- Churn is nearly equal for male and female customers.
- No major gender-based trend.

By Senior Citizen Status:

- 42% of senior citizens churned vs 24% of non-senior customers.
- Significant risk among senior citizens.

By Tenure:

- Customers with <10 months tenure are more likely to churn.
- Longer tenure indicates lower churn risk.

By Contract Type:

- Month-to-month: 43% churn
- One year: 11% churn
- Two year: 3% churn
- Long-term contracts reduce churn significantly.

Additional Patterns

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- No Tech Support or Online Security increases churn.
- Paperless billing and certain payment methods linked to higher churn.
- Internet and streaming services show moderate churn effects.

Recommendations

1. Improve early tenure experience to retain new customers.
2. Offer promotions for long-term contracts.
3. Provide support plans for senior citizens.
4. Upsell tech/security services to increase retention.
5. Review digital payment systems for churn-linked issues.