

Executive Summary Of Teleco Churn Analysis

Objective

The analysis aims to understand patterns and factors contributing to customer churn in the Telco Customer Churn dataset, enabling data-driven strategies for customer retention.

Dataset Overview

- Source: Telco Customer Churn dataset
- Records: Approx. 7,043 customers
- Attributes: Demographics, services subscribed, billing information, and churn status.
- Data Preparation:
 - Converted TotalCharges from string to float (replacing empty strings with 0).
 - Ensured proper numerical data types for key variables like tenure.
 - Handled missing values appropriately.

Key Findings (with Percentages)

1. Overall Churn Rate:

- 26.5% of customers in the dataset have churned.

2. Contract Type:

- 43% of month-to-month contract customers churned.
- Churn rates for one-year and two-year contracts were 11% and 3%, respectively.

3. Internet Service Type:

- Fiber optic users had a churn rate of about 42%.
- DSL and no-internet service users had churn rates of 19% and 7%, respectively.

4. Value-Added Services:

- Churn reaches 40% among users without Online Security or Tech Support.
- With these services, churn rates drop to 15-20%.

5. Demographics:

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- Senior citizens (16% of total) have a churn rate of 42%.
- Customers without a partner or dependents have churn rates of 37%, compared to 20% with family support.

6. Payment Method:

- Electronic check users have the highest churn rate at 45%.
- Other methods (credit card, bank transfer) are under 20%.

7. Monthly Charges:

- Customers paying >\$80 per month show churn rates over 50%.
- Customers paying <\$40 show churn rates under 10%.

Visual Insights

Bar charts, histograms, and heatmaps were used to visualize churn patterns.

Tools: Matplotlib, Seaborn

Recommendations

- Encourage long-term contracts through loyalty programs.
- Promote value-added services to reduce churn.
- Reconsider pricing for high-paying customers.
- Focus on senior citizens and single customers for retention.
- Address concerns with electronic check payment method.