

Customer Churn Analysis

This project delivers a detailed exploratory data analysis of customer churn behaviour in a subscription-based service, highlighting patterns across demographics, tenure, and contract types. • Overall Churn Rate: 26.5% of customers discontinued services, indicating that nearly 1 in 4 customers leave, a critical metric for retention strategy.

• Demographic Trends:

Gender distribution is balanced (50.3% male vs. 49.7% female), showing no major churn difference by gender. o Senior citizens account for a smaller share of the customer base (~16%) but show higher churn rates (40%+) compared to younger customers.

• Tenure & Loyalty:

Customers with less than 3 months of service are at the highest risk of churn (~45%), suggesting early-stage dissatisfaction. o In contrast, customers with >2 years tenure show churn rates below 10%, demonstrating strong loyalty.

• Contract Insights:

The Month-to-month subscribers form the largest group (~55% of customers) and churn the most (45% churn rate). o Customers with 1-year contracts churn at ~12%, while 2-year contract holders churn at only ~3%, proving the effectiveness of long-term commitments.

Conclusion:

The analysis reveals that customer churn is strongly influenced by contract type, tenure, and age demographics. To reduce churn, the company should: • Strengthen onboarding programs and incentives for new customers (first 3 months). • Encourage long-term commitments via discounts and loyalty rewards for annual contracts. • Provide targeted engagement and support for senior citizens, who face the highest churn risk.

Tools Used: Python (Pandas, Seaborn, Matplotlib) for data wrangling and visualization.