

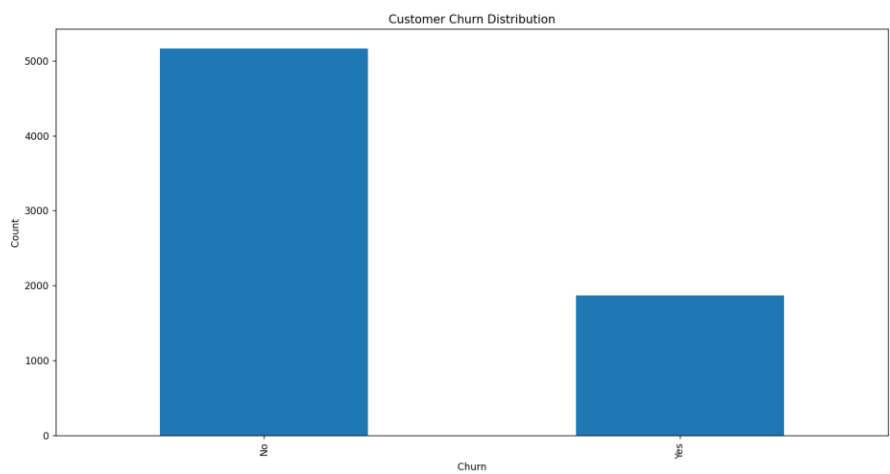
# Telecom Customer Churn Analysis Report

## Introduction

This report presents a detailed analysis of telecom customer churn using exploratory data analysis (EDA). Customer churn represents the percentage of customers who discontinue a service over a given period. Understanding the factors that influence churn is essential for telecom companies to enhance customer retention, optimize marketing strategies, and improve service quality. This analysis leverages demographic, billing, and service usage data to uncover patterns associated with churn behavior.

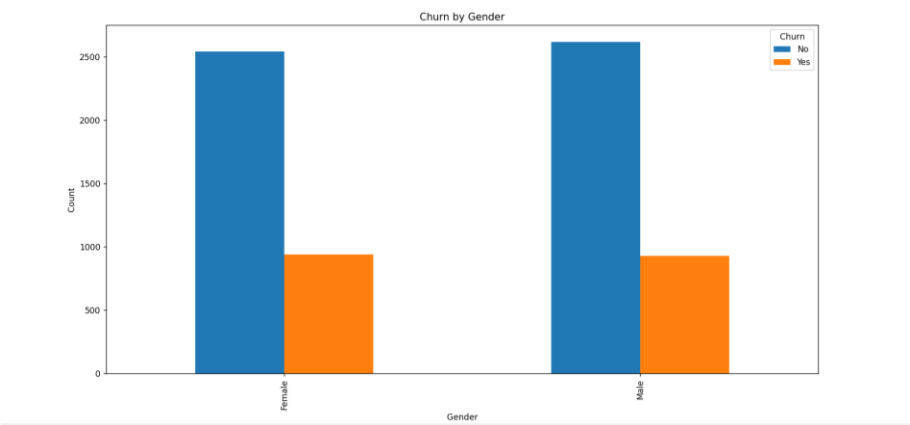
## Customer Churn Distribution

The chart below shows the distribution of customers who stayed versus those who churned.



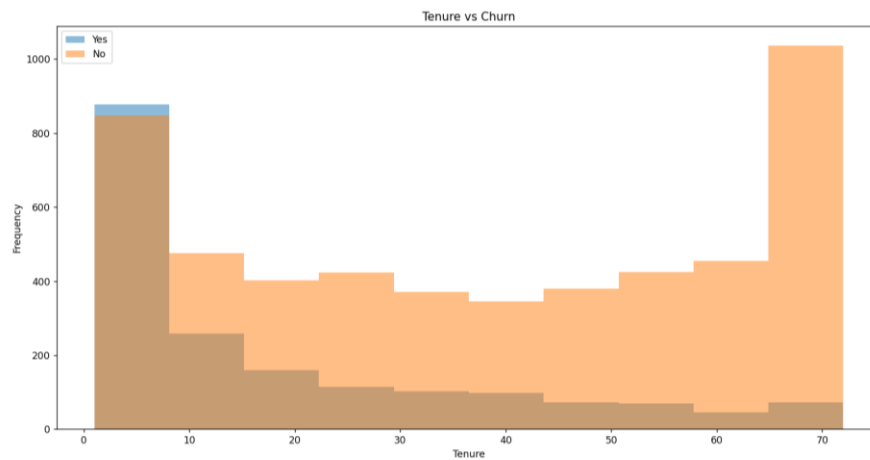
## Churn by Gender

The following chart compares churn rates between male and female customers.



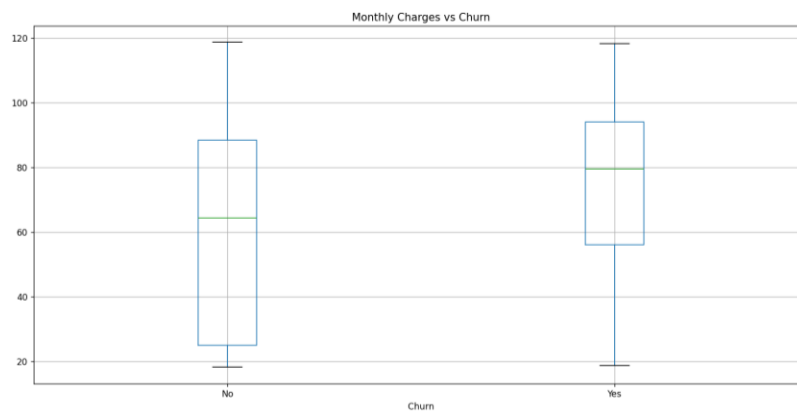
## Tenure vs Churn

The histogram below illustrates how customer tenure impacts the likelihood of churn.



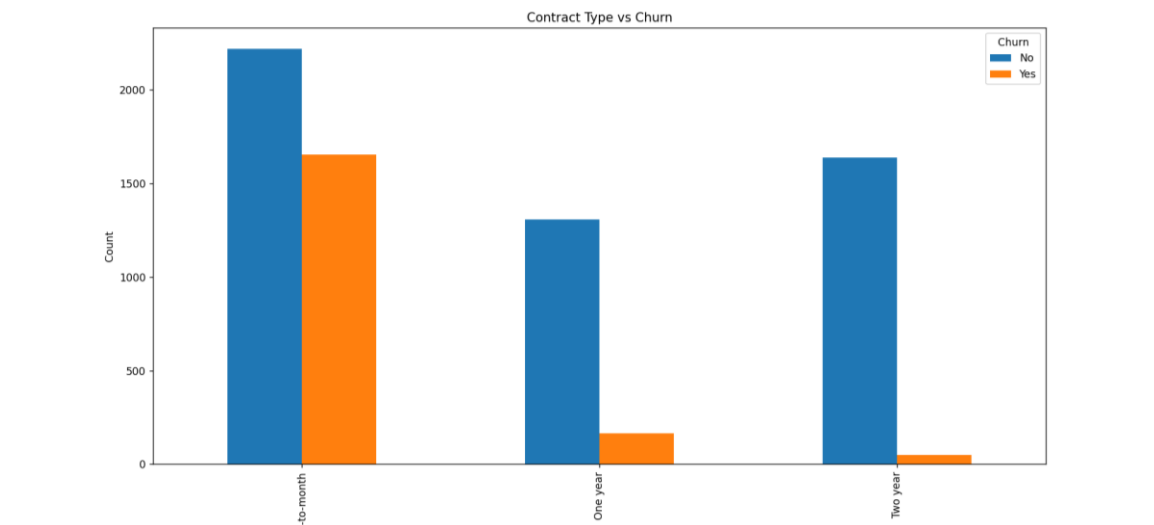
## Monthly Charges vs Churn

The boxplot below highlights differences in monthly charges between churned and retained customers.



## Contract Type vs Churn

This chart shows the relationship between customer contract types and churn behavior.



### Key Insights

- Month-to-month customers show the highest churn rates compared to one-year and two-year contract customers.
- Customers with shorter tenure are more likely to churn, indicating the importance of early engagement strategies.
- Customers who churn tend to have slightly higher monthly charges, suggesting pricing sensitivity.
- Gender does not show a significant difference in churn behavior, implying churn causes are independent of gender.
- Long-term contracts significantly reduce churn, demonstrating the effectiveness of commitment-based plans.

### Recommendations

- Introduce personalized retention offers for month-to-month customers to encourage contract upgrades.
- Develop onboarding programs targeting new customers to increase long-term engagement.
- Consider flexible pricing models or discounts for customers with high monthly charges.
- Enhance customer service touchpoints during the first three months to reduce early churn.

## **Conclusion**

The analysis highlights the major drivers of customer churn, with contract type, tenure, and monthly charges emerging as key factors. By addressing these areas with targeted retention strategies, telecom companies can significantly reduce churn rates and improve customer satisfaction. This report provides a foundation for deeper predictive modeling and strategic planning.