

Summary of Customer Churn Analysis

1. Data Cleaning & Preparation

- Missing values were handled.
- The "TotalCharges" column was converted to a numeric type.
- The "SeniorCitizen" column was mapped to "yes" and "no" instead of 0 and 1.

2. Exploratory Data Analysis

- Count Plot: Showed the number of customers who stayed vs. those who left.
- Pie Chart: Showed that around 26% of customers have churned, while 74% stayed.

3. Customer Behavior & Churn Reasons

- High Monthly Charges: Customers with higher bills tend to leave more often.
- Contract Type: Those on month-to-month contracts have a much higher churn rate compared to customers with long-term contracts.
- Service Issues: Many churned customers had additional services like online security or tech support missing, suggesting dissatisfaction.
- Senior Citizens: Older customers seem to have a slightly higher churn rate.
- Payment Method: Customers who pay through electronic checks have a higher churn rate compared to those using credit cards or bank transfers.

4. Insights

- Customer churn is a concern, and a noticeable portion of customers are
- Most customers who leave are those on monthly contracts, high bills, and electronic check payments.

- Customers without additional services like tech support are more likely to leave.
- Understanding these patterns can help reduce churn and improve customer retention.

5. Conclusion

- The analysis gives a basic understanding of customer churn.
- To make better decisions, more advanced techniques like correlation analysis or machine learning can be used to predict churn.
- The company can reduce churn by offering discounts for long-term contracts, improving customer service, and addressing payment-related concerns.