

Data Analysis Report

Title: Report of Telco Customer Churn

From
Tai Qi Zheng



Executive Summary

This analysis examines customer churn in an online subscription service. Using historical customer data (2019–2024), we identified key drivers of churn. The results indicate that customers with low engagement frequency, late payments, and basic-tier plans are more likely to churn. Predictive modeling suggests a potential reduction of churn by 18% if targeted retention strategies are implemented.

Objectives

- To identify what are the major factors contributing to customer churn.
- Provide actionable recommendations to improve retention.

Data Description

- Resources : Kaggle ([Link](#))
- There are 7043 customers in the data.

Table 1 : Data Description

Data	Description	Data	Description
Customer ID	Unique Number	Device Protection	(Yes/No/No internet service)
Gender	(Male/Female)	Tech Support	(Yes/No/No internet service)
Senior Citizen	(Yes/No)	Streaming TV	(Yes/No/No internet service)
Partner	(Yes/No)	Streaming Movies	(Yes/No/No internet service)
Dependents	(Yes/No)	Contract	(Month-to-month/ One year/ Two year)
Tenure	Length of cooperation	Paperless Billing	(Yes/No)
Phone Service	(Yes/No)	Payment Method	(Electronic check/ Mailed check/ Bank transfer (automatic)/ Credit card (automatic))
Multiple Lines	(Yes/No/No phone service)	Monthly Charges	Amount charged
Internet Service	(DSL/Fiber optic/No)	Total Charges	Total amount charged
Online Security	(Yes/No/No internet service)	Churn	(Yes/No)
Online Backup	(Yes/No/No internet service)		

Analysis & Findings (tables, charts, trends)

The effect of Payment Method to Churn

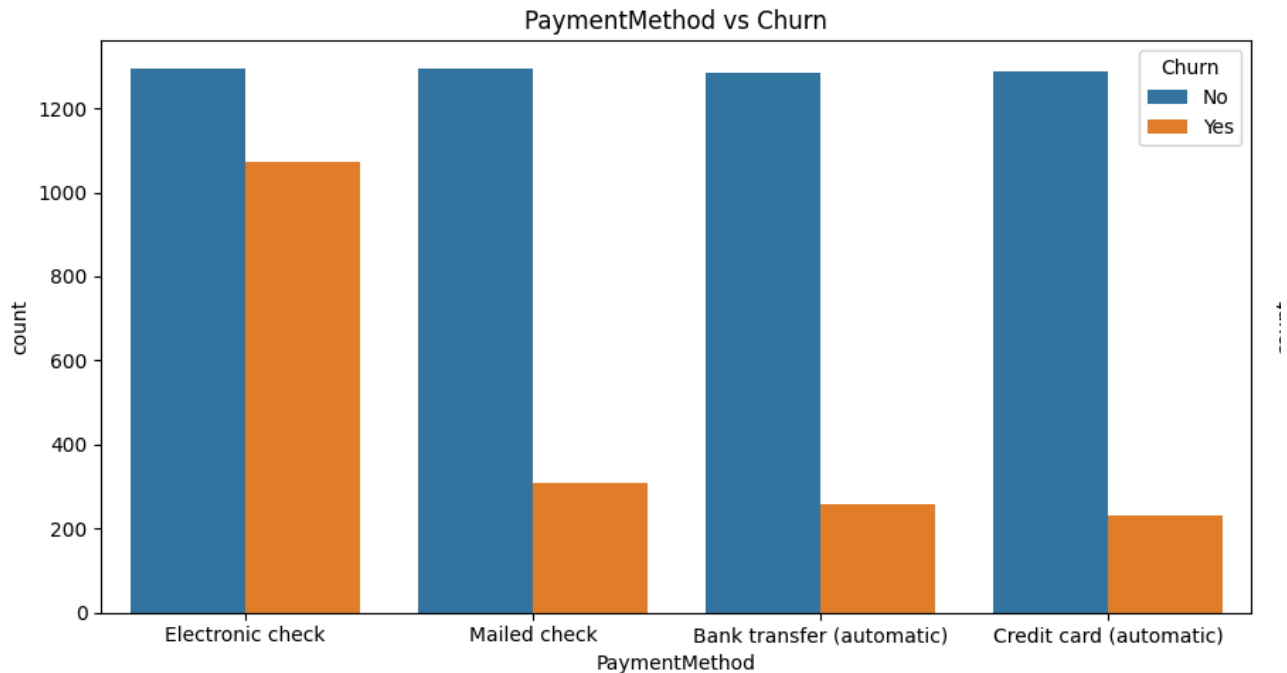


Figure 1

Figure 1 is a table that compares the Payment Method and Churn.

Based on the Figure 1 we can see that Electronic checks have a higher Churn compare with the Mailed check, Bank Transfer (automatic), Credit card (automatic). In this case, it shows that when the customer uses an automatic function for making payment it will reduce the chance of churn.

So there is a way to reduce the churn is to let the customer set up an automatic payment method. The way to increase the customer set up an automatic payment method. We can provide a promotion for the customer such as a discount RM 5 for each month when using automatic payment.

The effect of Contract type to Churn

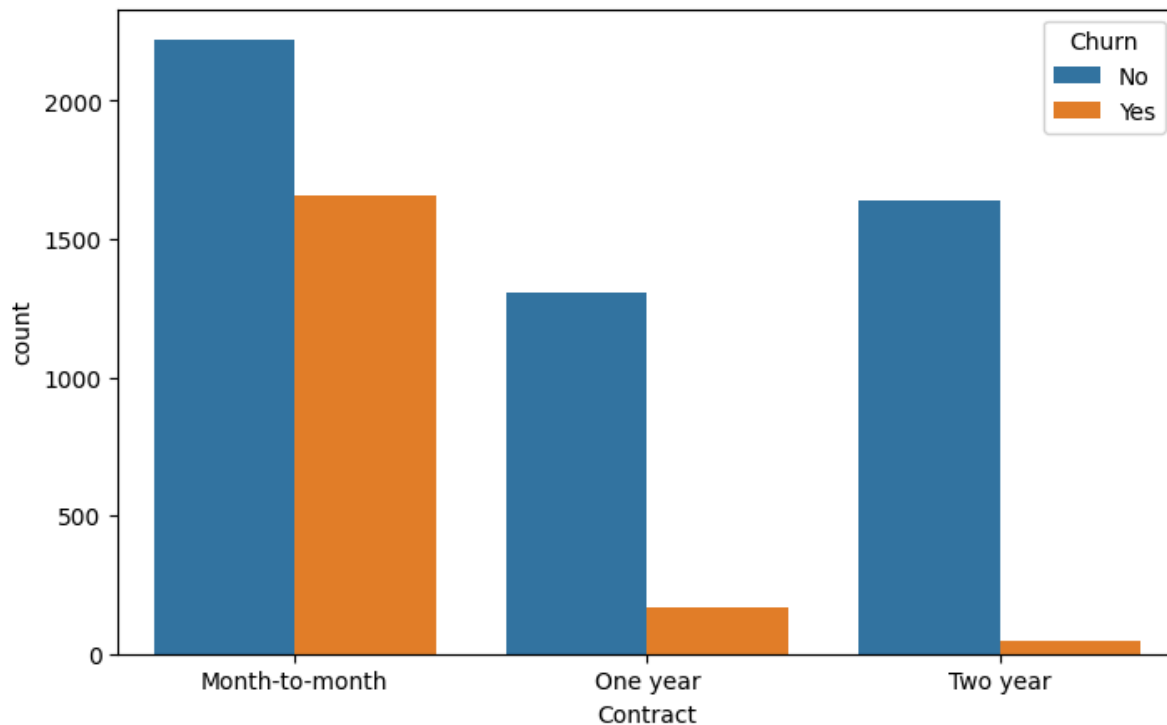


Figure 2

Figure 2 is a table that compares the Contract type and Churn.

Based on the Figure 1 we can see that month-to-month contract types have a higher Churn compared with the one year contract and two year contract.

In this Figure 2, it shows that the one year and two year contract type can reduce the chances of churn. So we need to promote the month-to-month contract customer to one year or two year contract. There are some ways to implement this, such as we can provide promotions or free gifts to customers when they are applying for a one year or two year contract.

Discussion & Insights

Recommendations

Conclusion

Appendix (if needed: SQL queries, code snippets, raw outputs)