Telco Customer Churn Analysis

Addisalem Kemal

Overview

Goal: Analyze telecommunication company customer data to predict whether or not a customer is likely to leave the platform (churn)

● Data from 7043 customers (21 features):

○ Churn (Yes or No)

○ Customer account information (tenure, contract, payments, etc.)

○ Demographic Information (Partner, Gender, Age, etc.)

○ Add-on services such as streaming and online protection

Target - Customer Churn
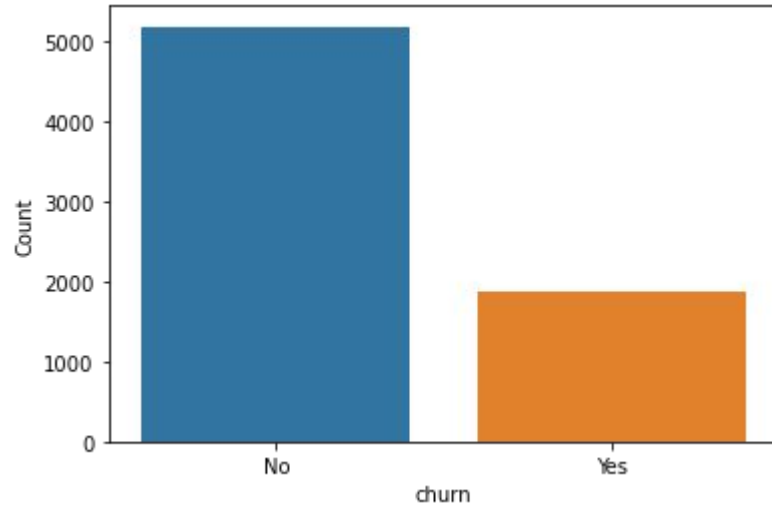
Logistic Regression Model

Accuracy of Logistic Regression classifier on
Test set: 0.79

	precision	recall	f1-score	support
0	0.84	0.89	0.86	1035
1	0.64	0.52	0.57	374
accuracy			0.79	1409
macro avg	0.74	0.71	0.72	1409
weighted avg	0.78	0.79	0.79	1409

Conclusion

- Customers with monthly contracts are more likely to churn than with annual contracts
- Customers have the highest probability of churning within 20 months
- Tech-Support & Online Security add-ons play a critical role in preventing churn
- Customers are twice as likely to churn when the monthly charge is greater than $60

All the data and methodology can be found here

https://github.com/Addisalem-Kemal/Telco_churn