Telco Customer Churn
EDA
Nathanael Yoga

## DIBIMBING DATASCIENCE BOOTCAMP
DAY 16 ASSIGMENT

The Data

Telco Systems is a global leader in telecommunications, with over 40 years of experience in the design and development of high-performance network communications solutions. Operating on the cutting edge of technology, Telco Systems provides solutions for current carrier ethernet networks, as well as the latest NFV network architectures.

The data is sourced from Kaggle. In our dataset, we have 7043 rows (each representing a unique customer) with 21 columns: 19 features, 1 target feature (Churn). The data is composed of both numerical and categorical features.

Customer churn occurs when **customers** or **subscribers** stop doing business with a company or service, also known as **customer attrition**. It is also referred as loss of clients or customers. One industry in which churn rates are particularly useful is the telecommunications industry, because most customers have multiple options from which to choose within a geographic location.

Churned

We can see from the chart, that about 26,54% of Telco Customer end up churning
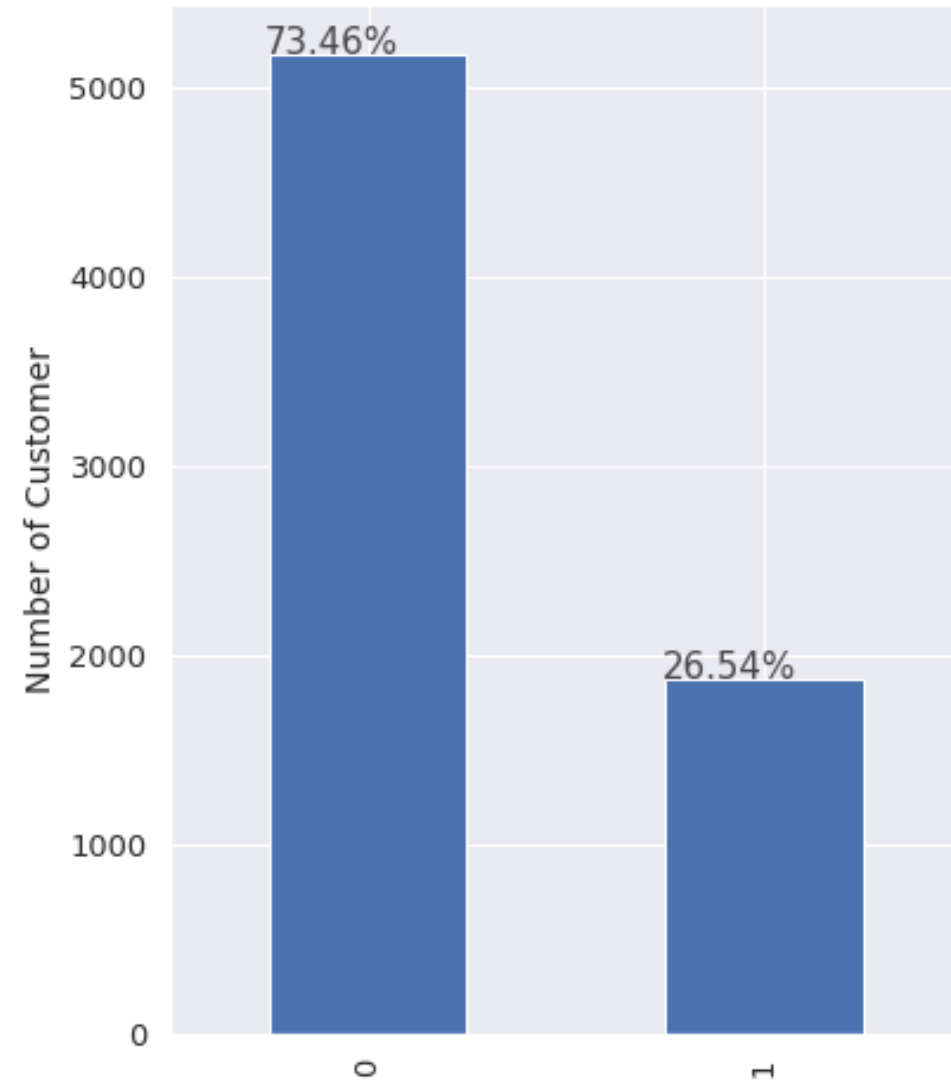
From the heatmap, we can see correlation between variable.

The 5 strongest variable that have highest correlation with Churn are :
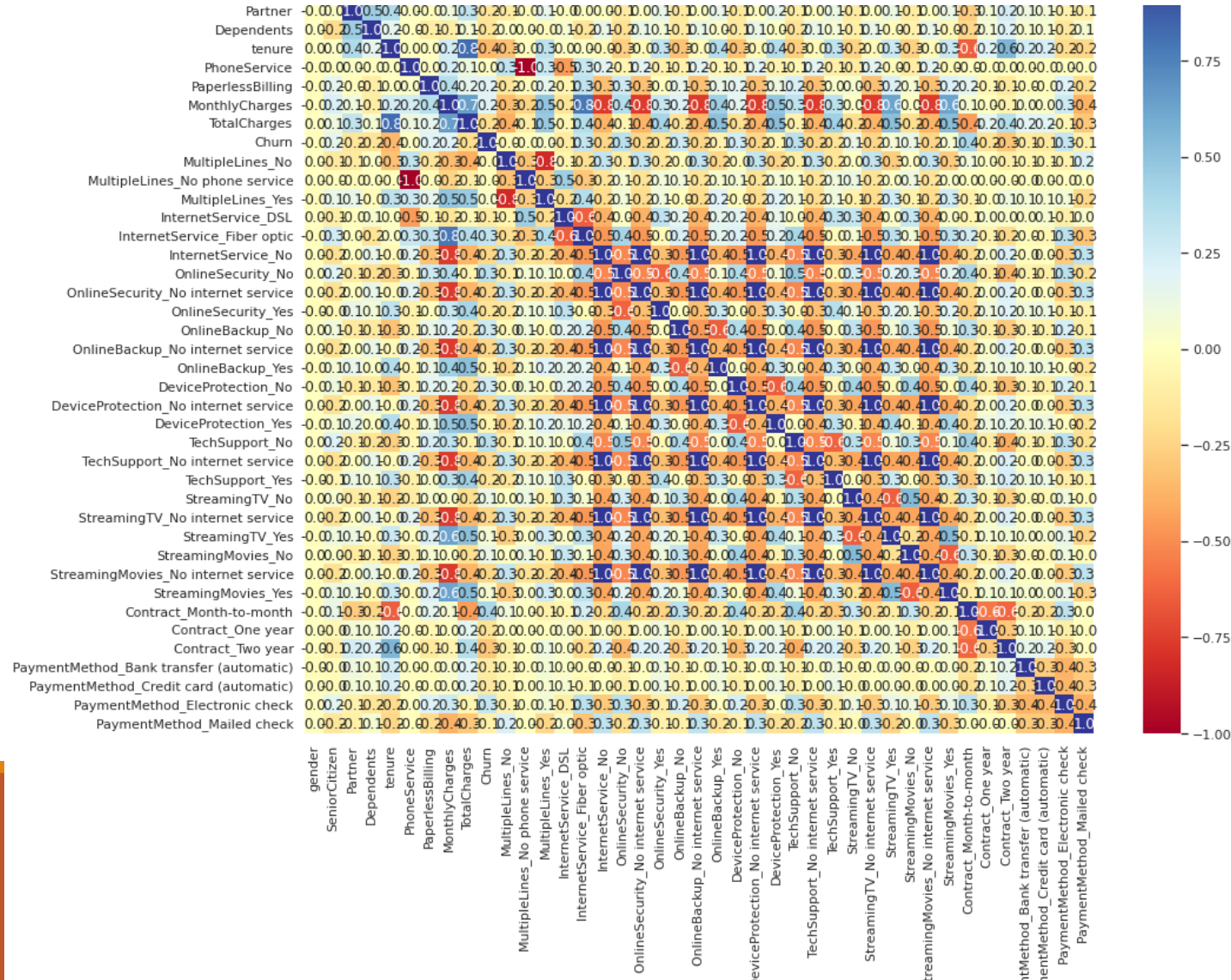
Contract_Month-to-month, `0.405103`

TechSupport_No, `0.337281`

OnlineSecurity_No, `0.342637`

InternetService_Fiber optic, `0.308020`
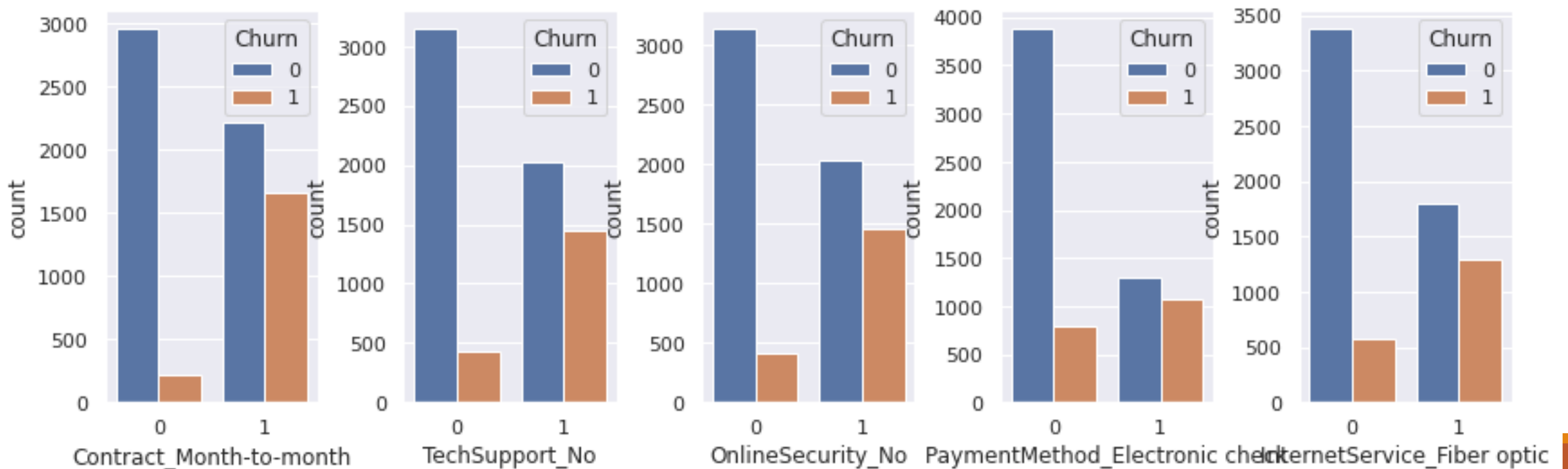
PaymentMethod_Electronic check, `0.301919`

So,We will focus on those 5 variables

Summary

From the strongest variables, we can make a conclusion that the customer which end up Churning, tend to choose a contract term of month-to-month, does not have TechSupport add-on, does not have Online Security add-on, Choose their payment method to be Electronic check, and a Fiber Optic internet service type.

I hypotheses that the customer that end up churning does not have any intention to use Telco services for a long time. Based on this variables that they choose a per month- contract type, doesn't want a tech support, only need Fiber optic internet service (fast internet), and use electronic check as payment method.

Google Collab Link

https://colab.research.google.com/drive/15BZnIkOZml6XJv09HAEnh6JyZOZM0tLX?usp=sharing