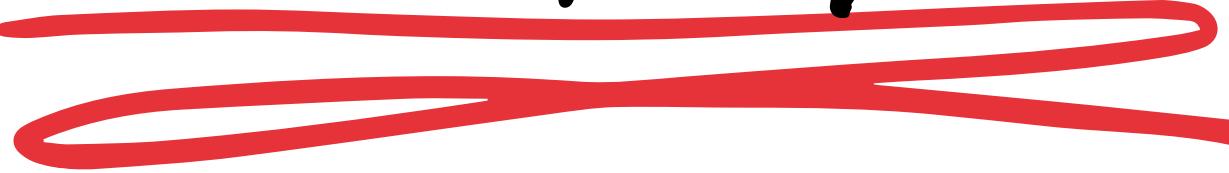


Customer Churn Analysis

Problem Statement:
Customer churn is a big business killer. Even small increases in churn can cut your revenues in half.

Reducing customer churn is a key business goal of every telecom company.



Customer Churn

Customer churn refers to customers stopping the use of a service, switching to a rival service, switching to a lower-tier experience in the service or reducing engagement with the service.

Customer Retention

Customer retention refers to the ability of a company or product to retain its customers over some specified period.

It is easier to to
retain a current
paying customer
than to acquire a
new customer.

Methodology:

Predict the possible customer churn using the data

Take precautions against churn before it comes true.

Business Questions



Factors

What are the most important factors affecting the customer churn?

Prediction

How can telecommunication companies handle the problem of customer churn with predictive modelling?

Retaining

What is necessary to retain churning customers?

Information used in prediction

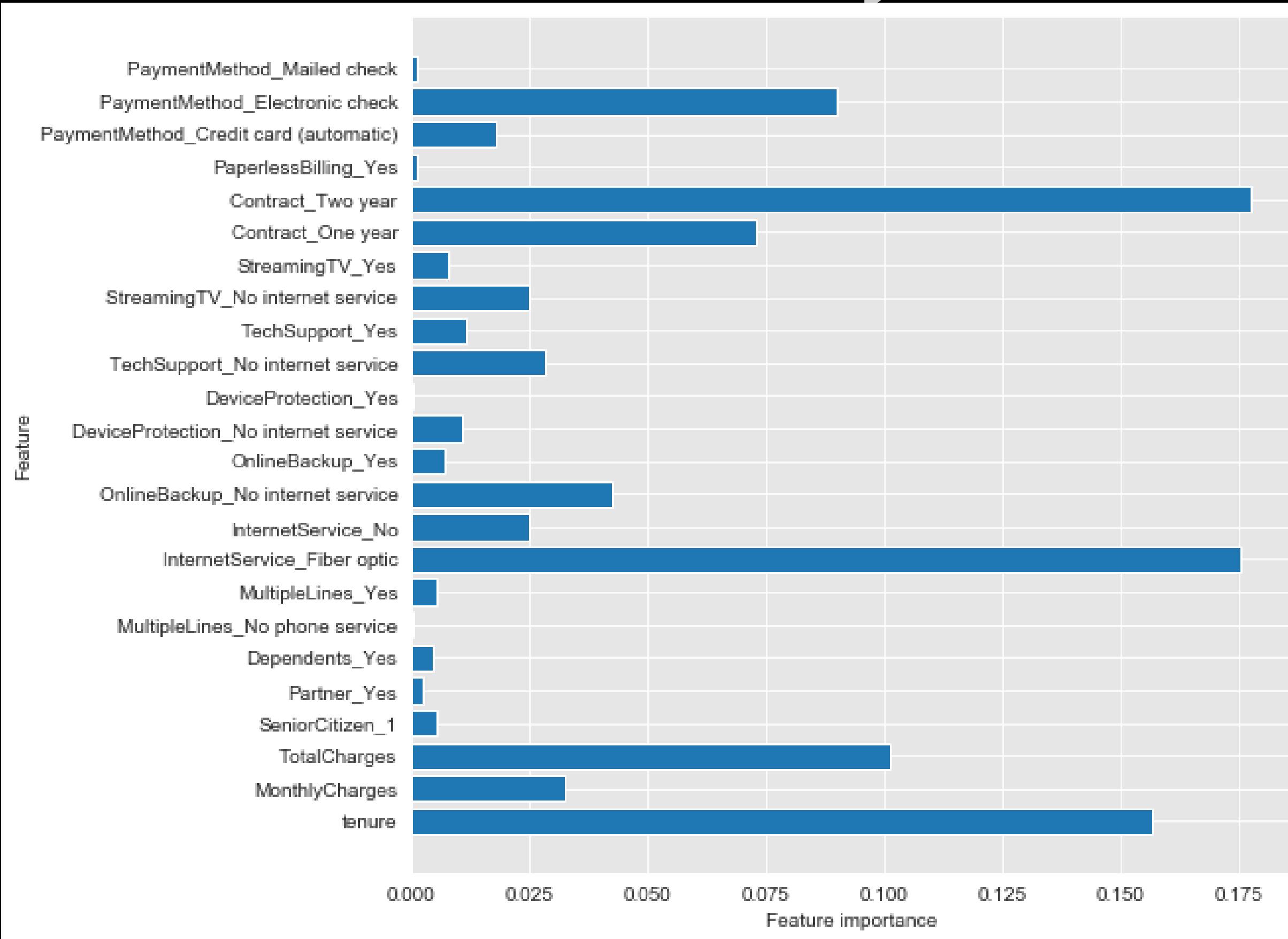
- * Monthly and total charges
- * Partner and dependents
- * Tenure and contract information
- * Internet, tech support TV services
- * Billing and paying information



What are the most

important factors
in customer churn?

Factors affecting the customer churn



Positive factors:

Two year contract

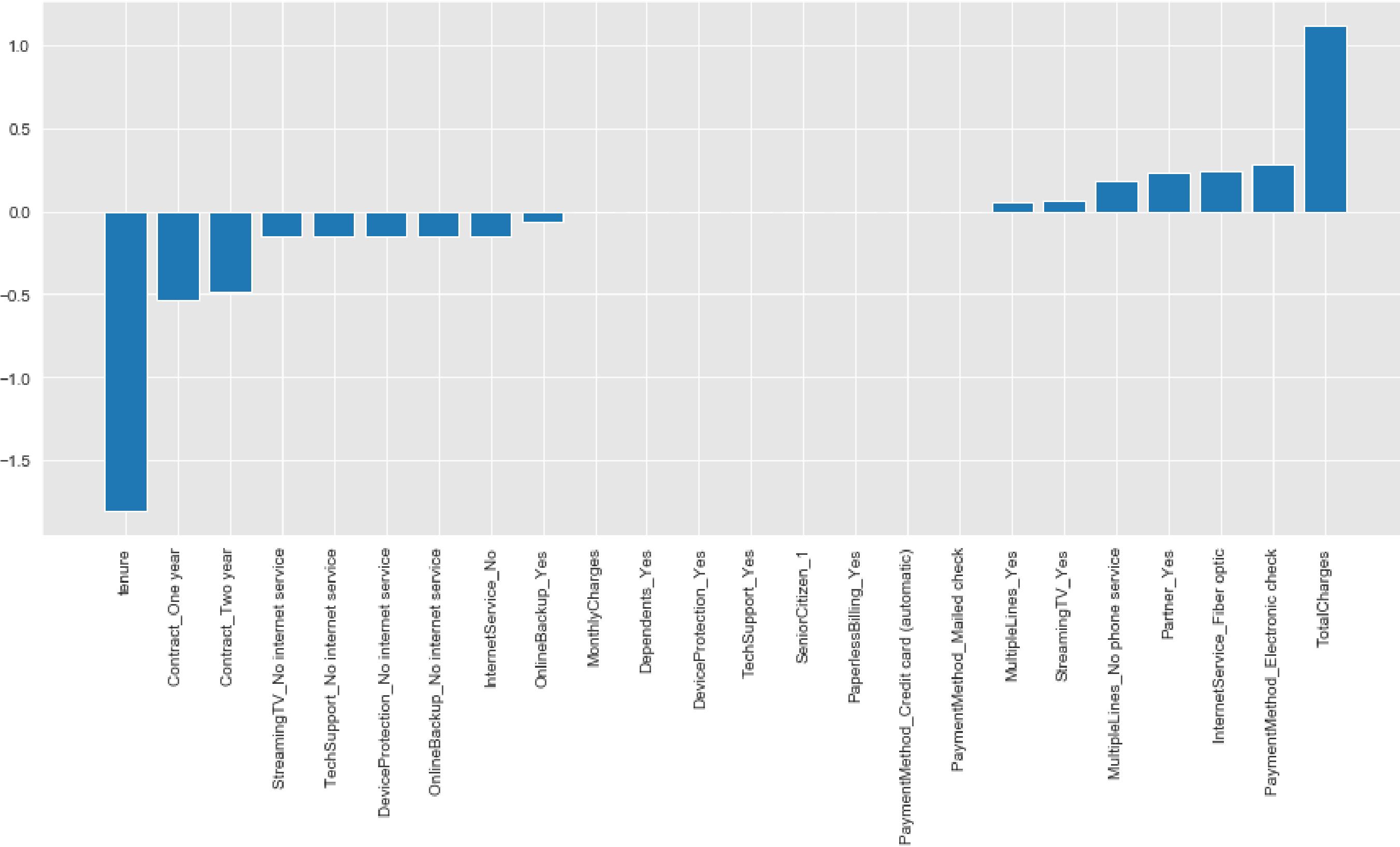
One year contract

Tenure

Negative factors:

Fiber optic service

Factors affecting the customer churn



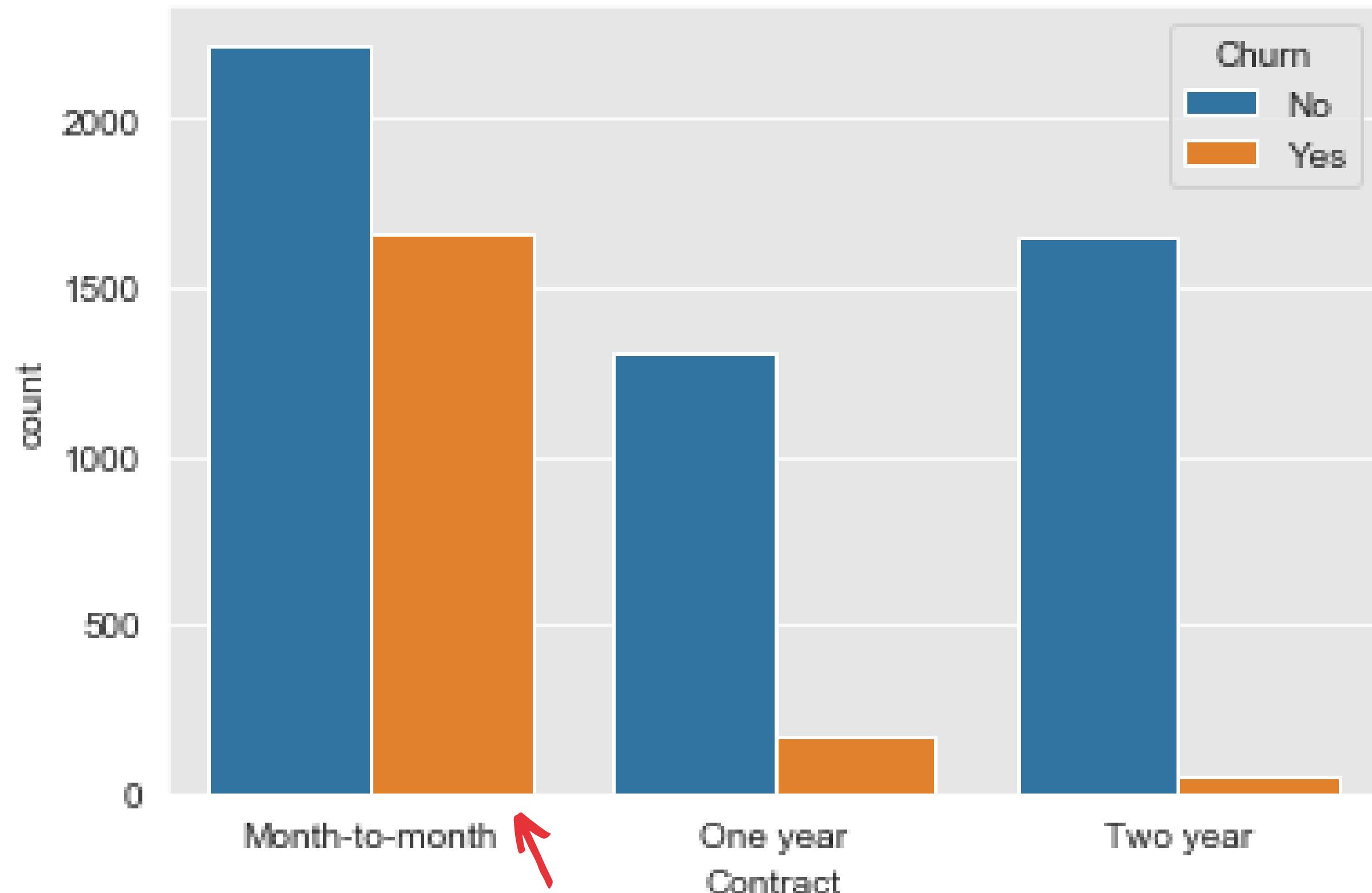
Positive factors:

Two year contract
One year contract
Tenure

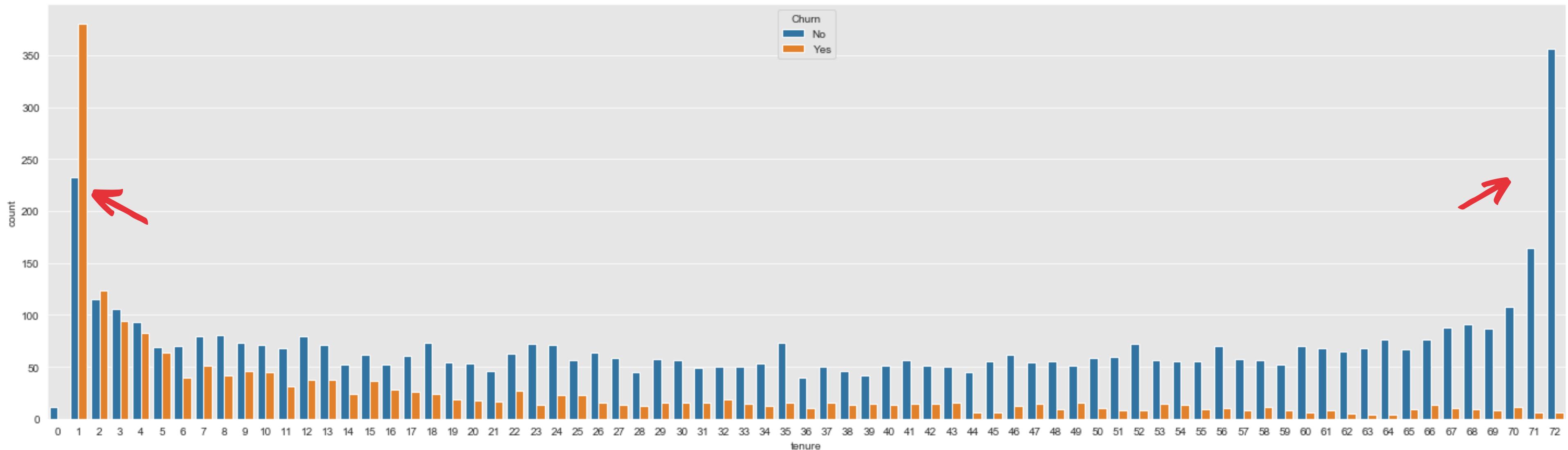
Negative factors:

Fiber optic service
Total Charges
Electronic Check
Payment

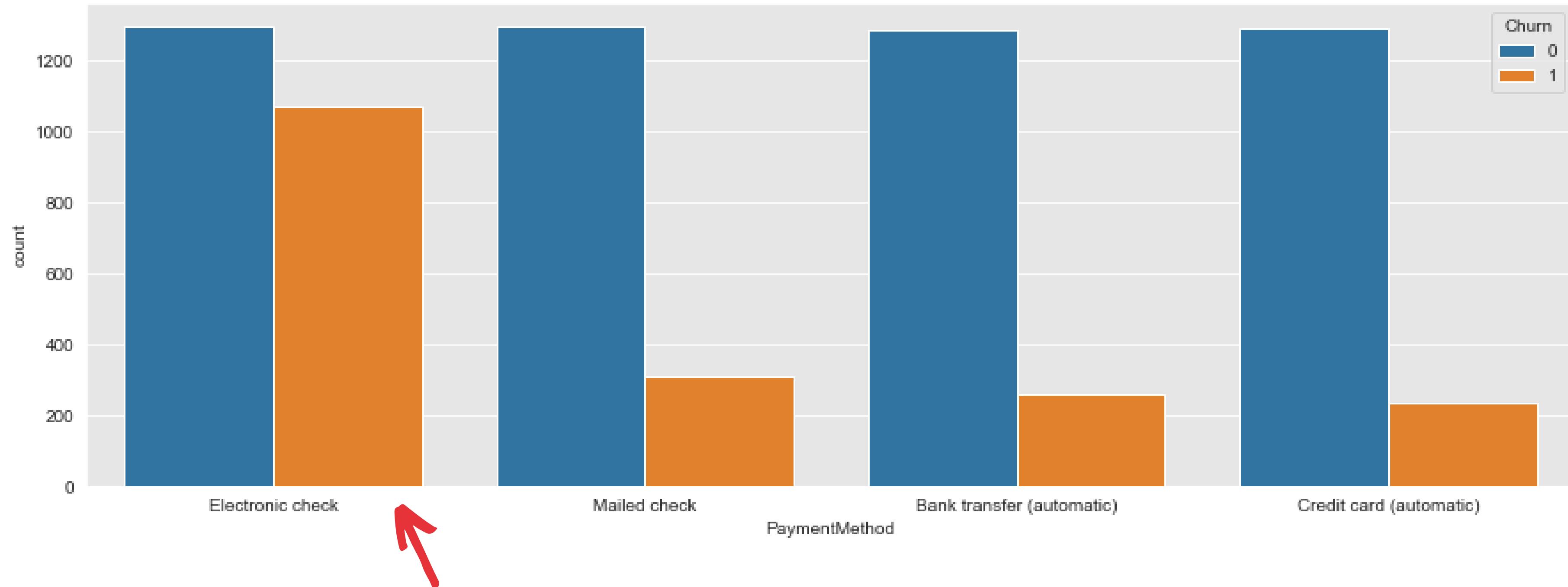
Contract information of the customers



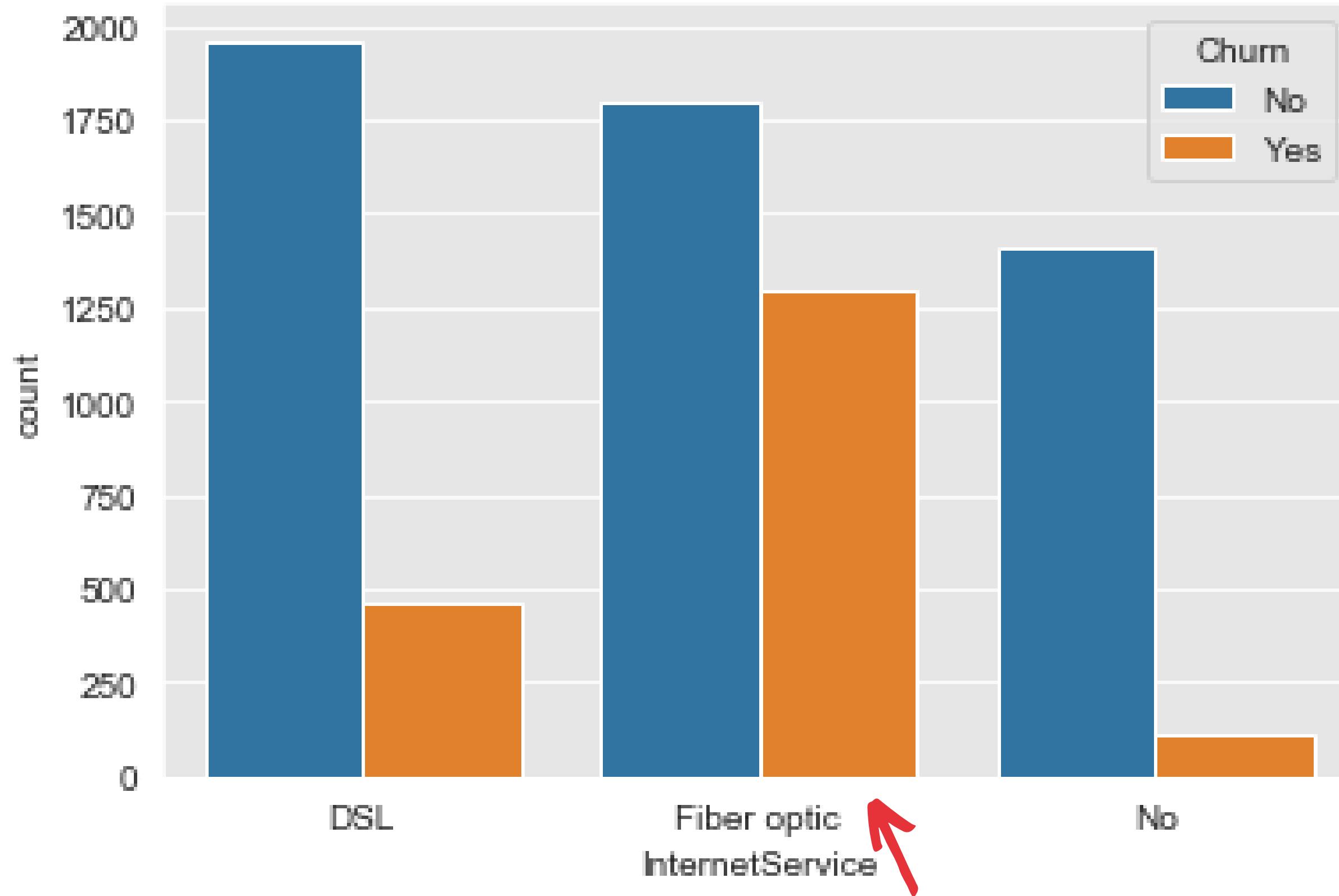
Tenure information of the customers



Payment method information of the customers



Internet service information of the customers





How can we
retain customers
by predictive
modelling?

*Machine learning
models derived
from the given
data predict
customer churn
with 80% accuracy.*



**Find the customers at
high risk to churn.**



**Direct retention efforts
toward such customers.**

What is necessary to retain churning customers?



Good experience

Listen to customers and act on feedback.
Provide more human interactions.

Technology

Invest on internet quality and coverage.
Check the coverage and internet speed of of high risk customers.

Offers

Make offers to tenure customers to increase loyalty and keep them engaged.

Make offers to month to month customers and make yearly contract.

Summary

Churn prediction is made with the information of customers.

Yearly contract and internet speed, tenure and total charges are important in the model.

The goal is to retain customers before they leave.

Future Work



Rival companies

Comparison of our company's and other companies' prices , coverage and internet speed at a given region can be a good predictor.

Customer churn usually occurs when a rival company makes a good offer to our customers.

Future Work

Data usage information

What percent of internet package is used?

How much does the internet speed change after some threshold?

...



Future Work



Customer Service Calls

Customer service calls is a measure of (usually) bad experience.

Number of calls can be a good predictive of high risk churn group.

Future Work



Zipcode and / or address

Location of the customer gives information about the technology at the given region.

Offers can be made according to the average income of the given zipcode.

Future Work

Complaints data

Text data from e-mails and other websites can be used to find the possible complaints and solve them before they cause customer churn.



Appendix



TAKE A LOOK AT THE COEFFICIENTS OF THE SECOND BEST MODEL TO COMPARE WITH THE MAIN MODEL

