Customer churn in banking industry!

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TABLE OF CONTENTS

Introduction

Customer churn: is the percentage at which customers stop doing business with an entity.

Problem:

- High competition in the banking industry
- Improving customers retention rate by up to 5 % will increase your bank's profit by up to 85 %.
- Attracting new customers costs more than retaining the old customers

Solution:

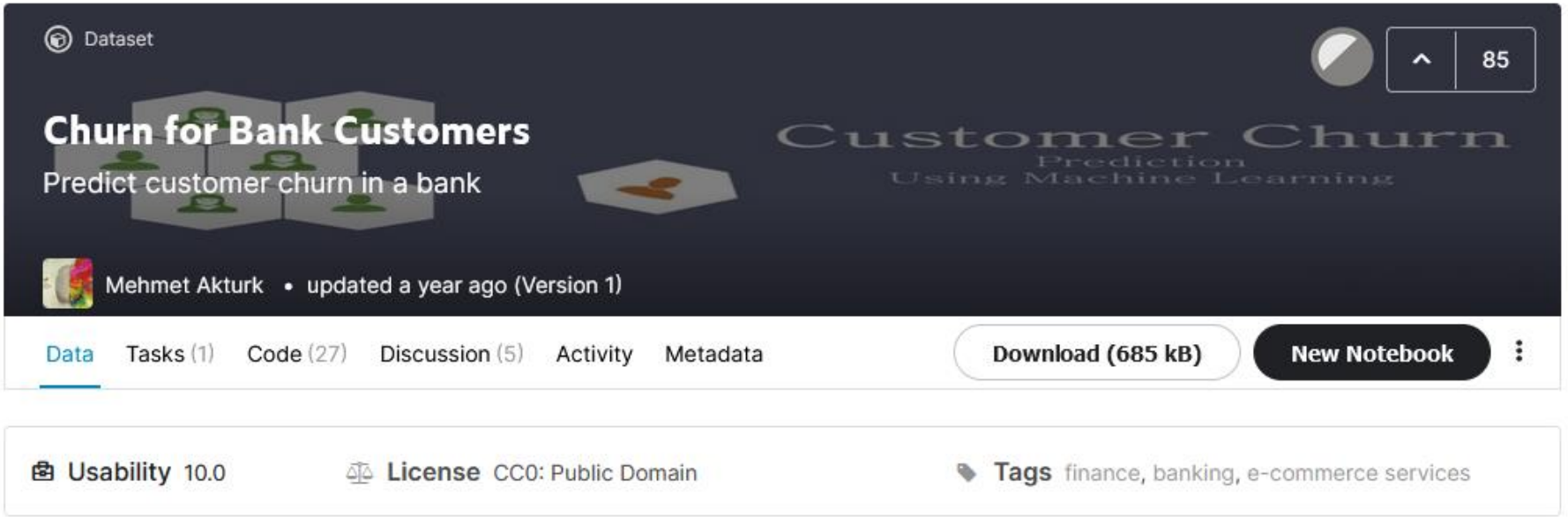
Machine learning models to predict customer churn!

So, Can machine learning predict which customer will churn? We will see together

Data

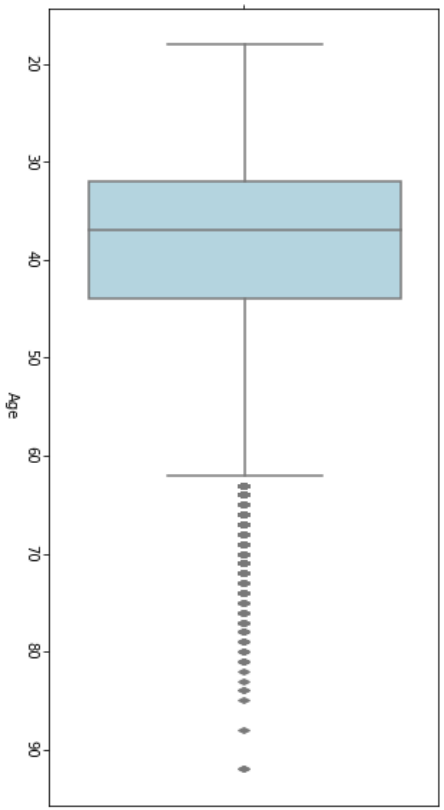
- RowNumber
- CustomerId
- Surname
- CreditScore
- Geography
- Gender
- Age
- Tenure
- Balance
- NumOfProducts
- HasCrCard
- IsActiveMember
- EstimatedSalary
- Exited

Data source


Dataset
85
Churn for Bank Customers
Predict customer churn in a bank
Customer Churn
Prediction
Using Machine Learning
Mehmet Akturk • updated a year ago (Version 1)
Data
Tasks (1)
Code (27)
Discussion (5)
Activity
Metadata
Download (685 kB)
New Notebook
Usability 10.0
License CC0: Public Domain
Tags finance, banking, e-commerce services

Data Cleaning

Data Cleaning



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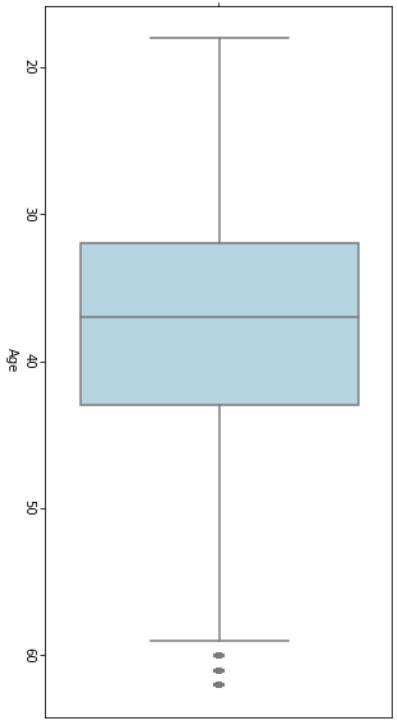


Tools

Pandas

jupyter

matplotlib

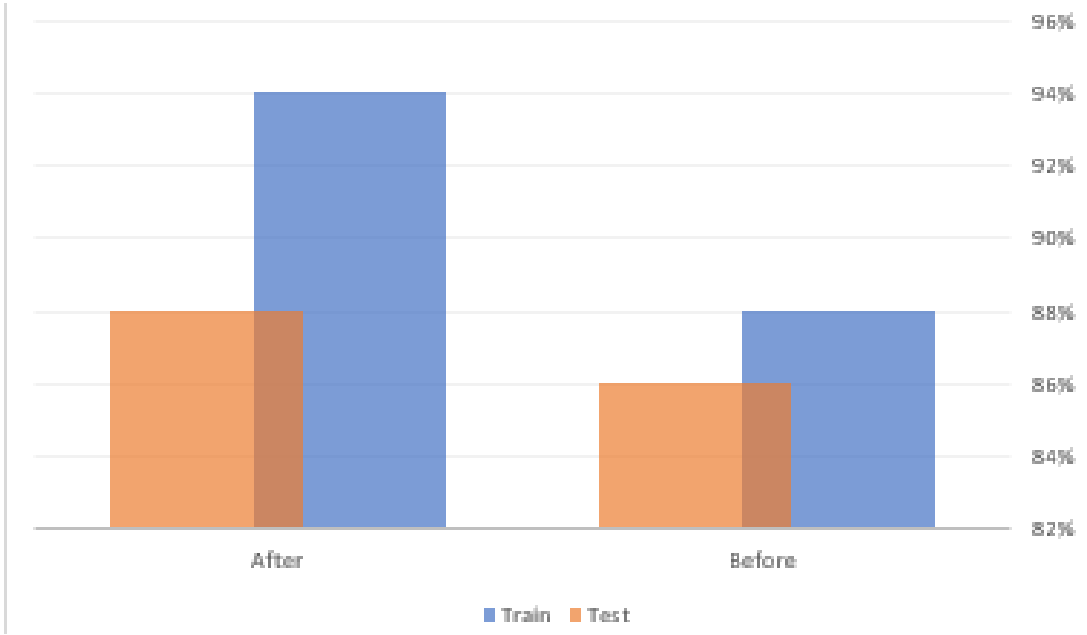
scikit learn

Algorithms

Accuracy score vs Models

Let's tune the Random Forest!

Hyperparameter Tuning



Conclusion

The accuracy of all algorithms was good, but after adjusting the random forest algorithm, it became better than others, so I recommend applying it.

Thank you!

Do you have any questions?