Customer Churn Predictor

A machine learning prediction app for preventing customer loss at an early stage

Motivation

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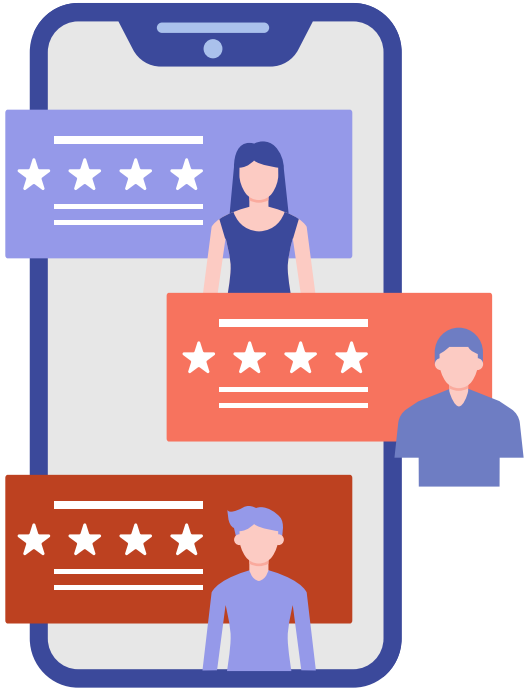
- Losing customers is undesirable
- The cost of acquiring a new customer is higher than retaining an existing customer.

Goal

- Provide reliable and accurate predictions on if a customer is at risk of churn for Orange Telecom company
- With the prediction result, the company can come up with certain strategies to retain these customers

Live Demo



Dataset

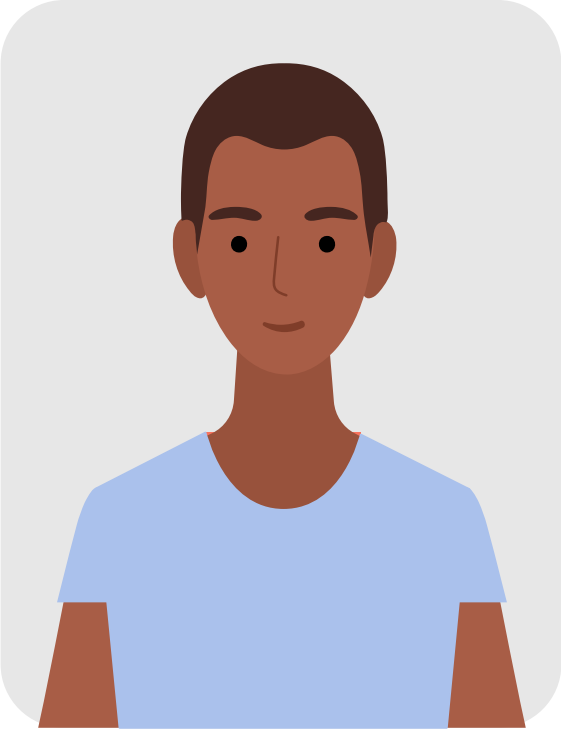
From Kaggle.com

2666 observations

Binary response variable: churn (Yes/No)

RDS

Store user inputs and prediction results



Features

- International plan
- Voicemail plan
- Number of voicemail messages
- Total day minutes
- Total evening minutes
- Total night minutes
- Total international minutes
- Total international calls
- Customer service calls

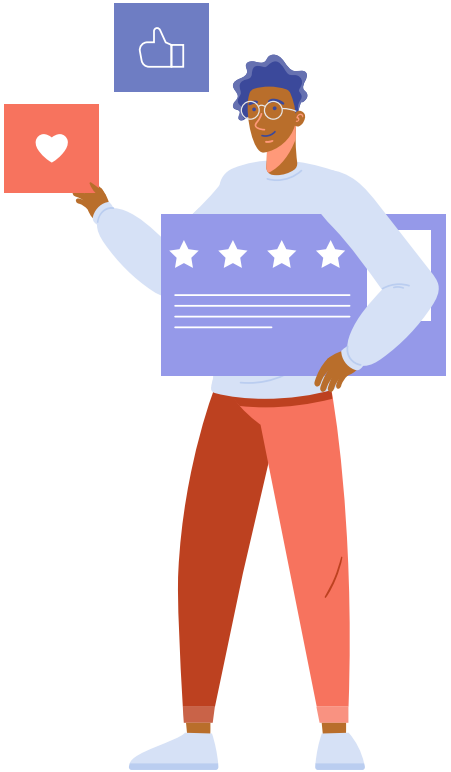
Model

Random forest Classifier

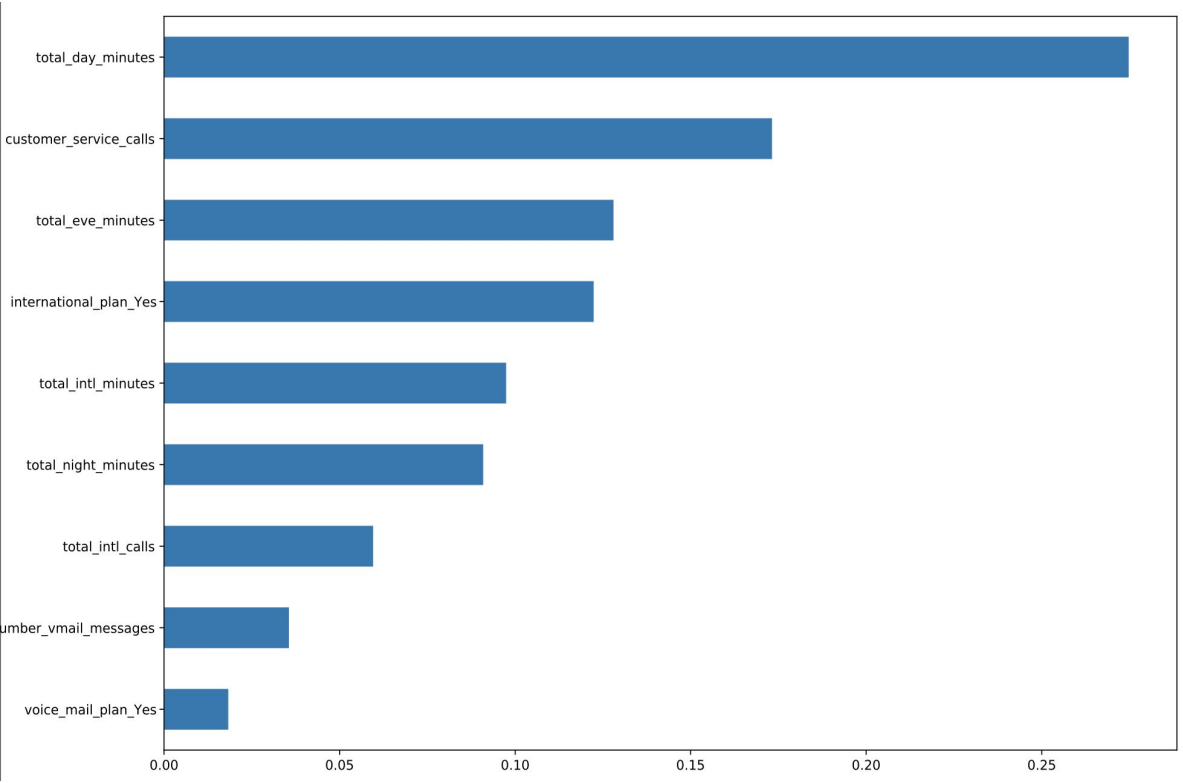
- Online model: Make predictions based on user input customer information via pretrained random forest classifier

Success Criteria

- Model performance metric:
  - Accuracy on the test set: 0.951
- Business metrics:
  - 5% increase in customer retention rate in one month
  - 5% increase in average customer lifetime



Insights



- Total day minutes, number of customer service calls, and total evening minutes are the top 3 most important features.
- Customers with international plan are more likely to churn (0.07% among non-churn customers vs. 0.30% among churn customers).

Thank you!

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