SYRIATEL CUSTOMER CHURN

Author : Sylvester Magunda
Date: Oct 21st , 2023

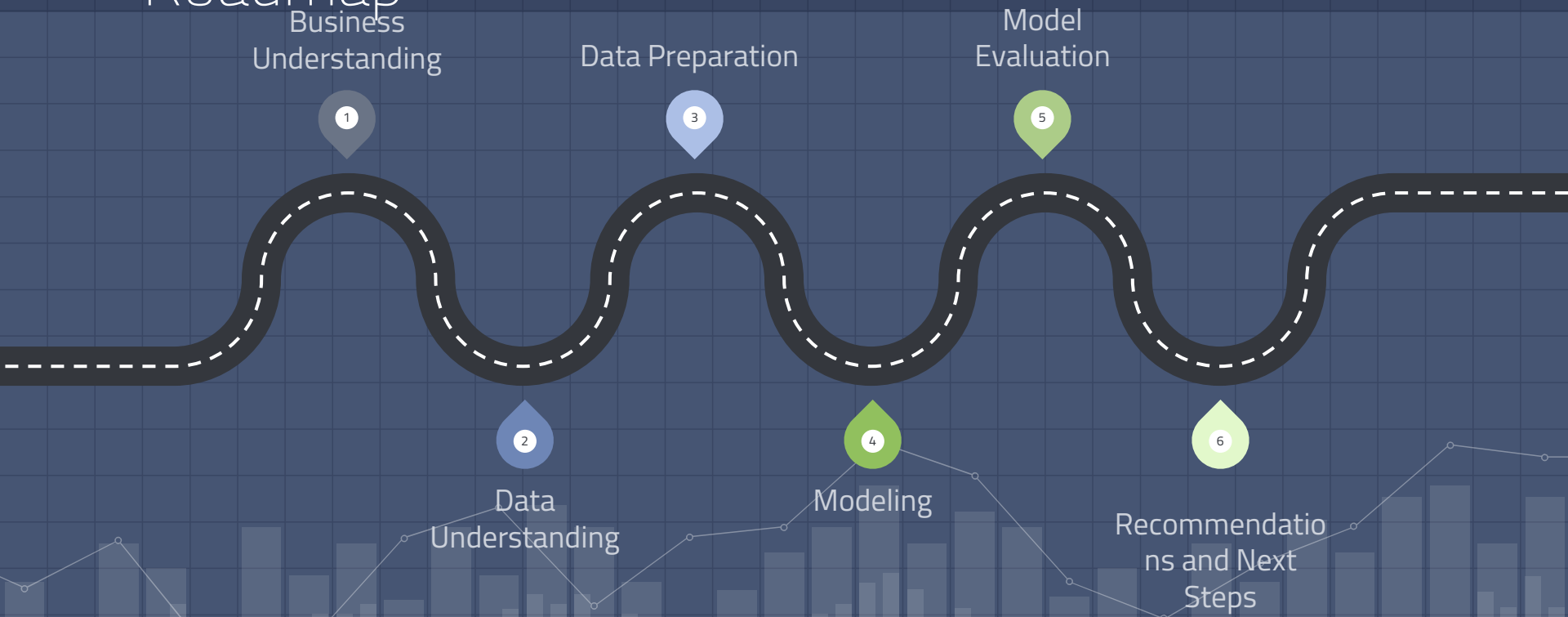
Project Overview

- This project uses machine learning algorithms to build a predictive model that accurately identifies customers likely to churn.
- The target variable is “churn”
- Classification algorithms are build
- Recall is used to evaluate the models

Business Problem

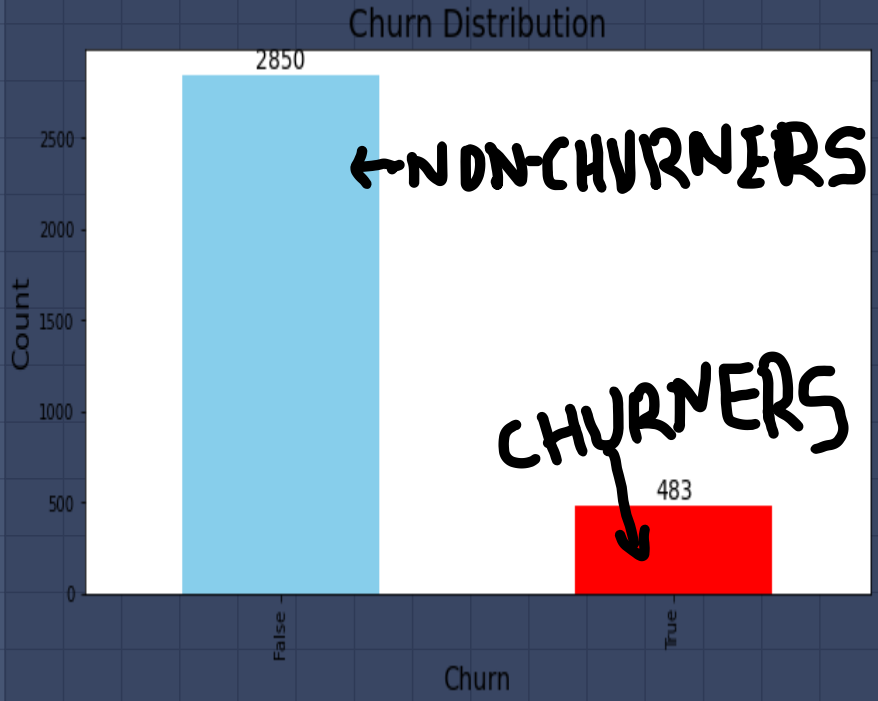
- To help Syriatel predict customers likely to churn.
- To identify key features leading to customer churning
- To find solutions to customer churning

Roadmap

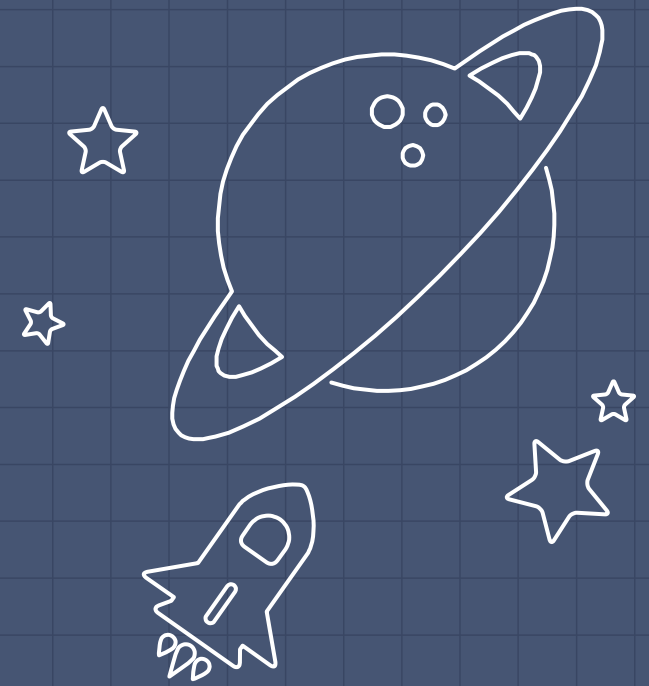

Business Understanding
1
Data Understanding
2
Data Preparation
3
Modeling
4
Model Evaluation
5
Recommendations and Next Steps
6

Data

- Obtained from Kaggle.
- The dataset contains 20 predictor variables and target variable(churn), with 3,333 records
- There are 483 churners and 2850 non-churners



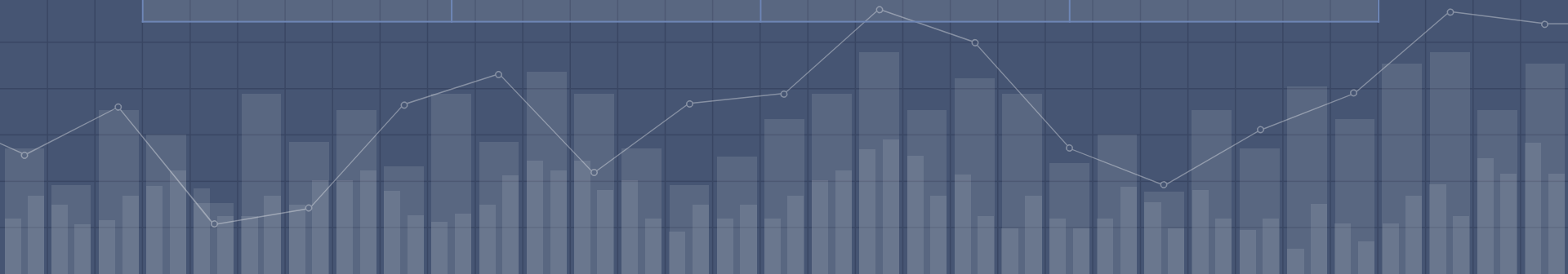
Method



- Four classification models were build
- Decision tree model had best scores after hyperparameter tuning.

Results

	Logistic Regression	K-nearest Neighbors	Random Forest
Recall Score	0.24	0.09	0.67
Precision Score	0.46	0.36	0.75
Accuracy Score	0.84	0.84	0.92



Results

Decision Tree

Recall score - 0.72

Precision score - 0.47

Accuracy score – 0.83

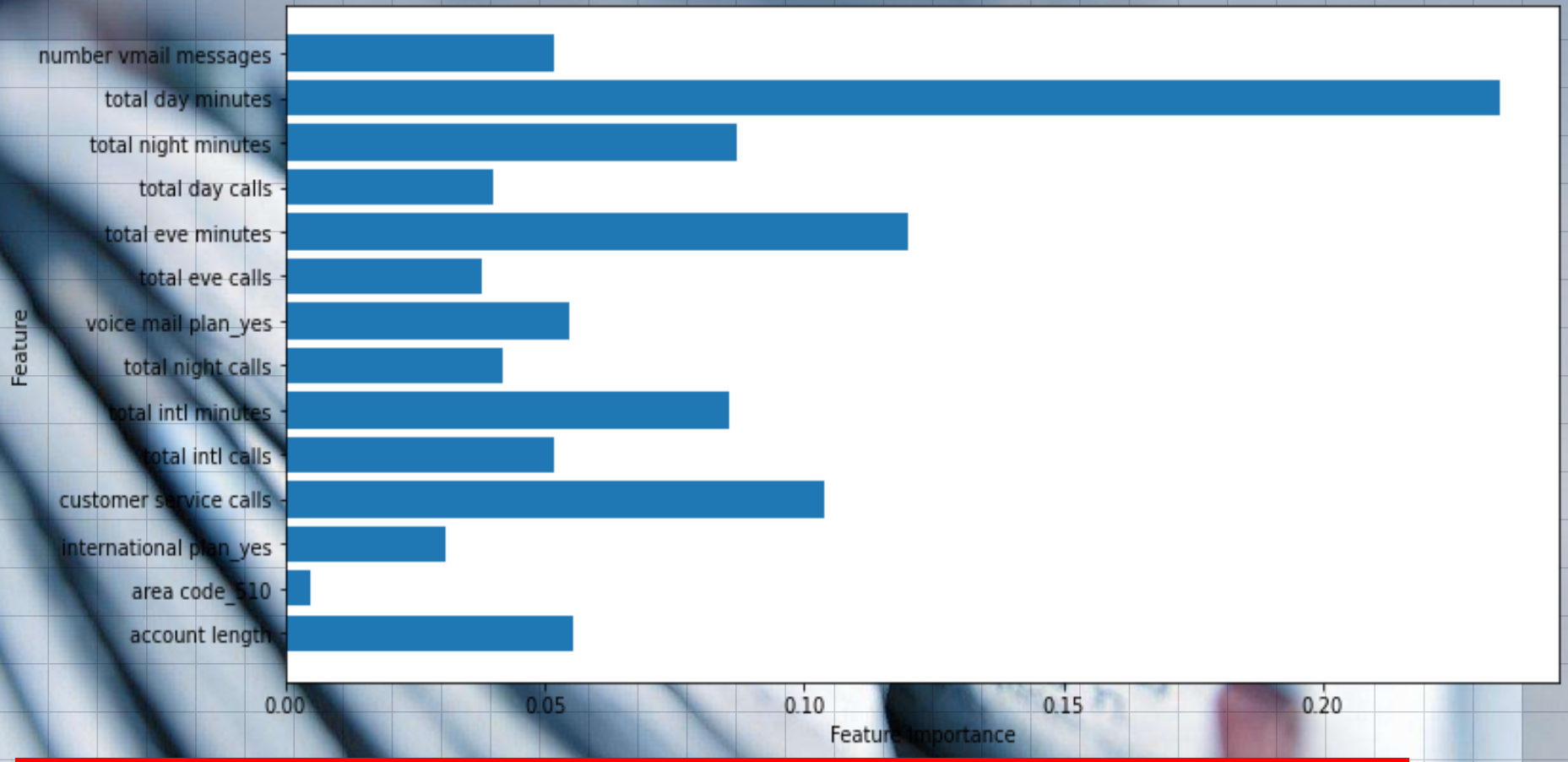
Hypertuned Decision Tree

Recall score - 0.74

Precision score - 0.47

Accuracy score – 0.83

BEST MODEL



Important features for predicting customer churn

Conclusion

- Syriatel should ensure a robust customer service strategy by tracking and addressing both negative and positive feedbacks
- The company should lower charges per minute to retain clients
- Syriatel should also ensure their customer service employees solve customer's issues when they call in.

Next Steps

The size of the training data should be increased to improve the model.

THANKS!

Any questions?

You can find me at

- Github: @SylvesterMagunda
- Email: sylvestermagunda@gmail.com