

# SYRIATEL CUSTOMER CHURN



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# 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 Preparation

3

Model  
Evaluation

5

2

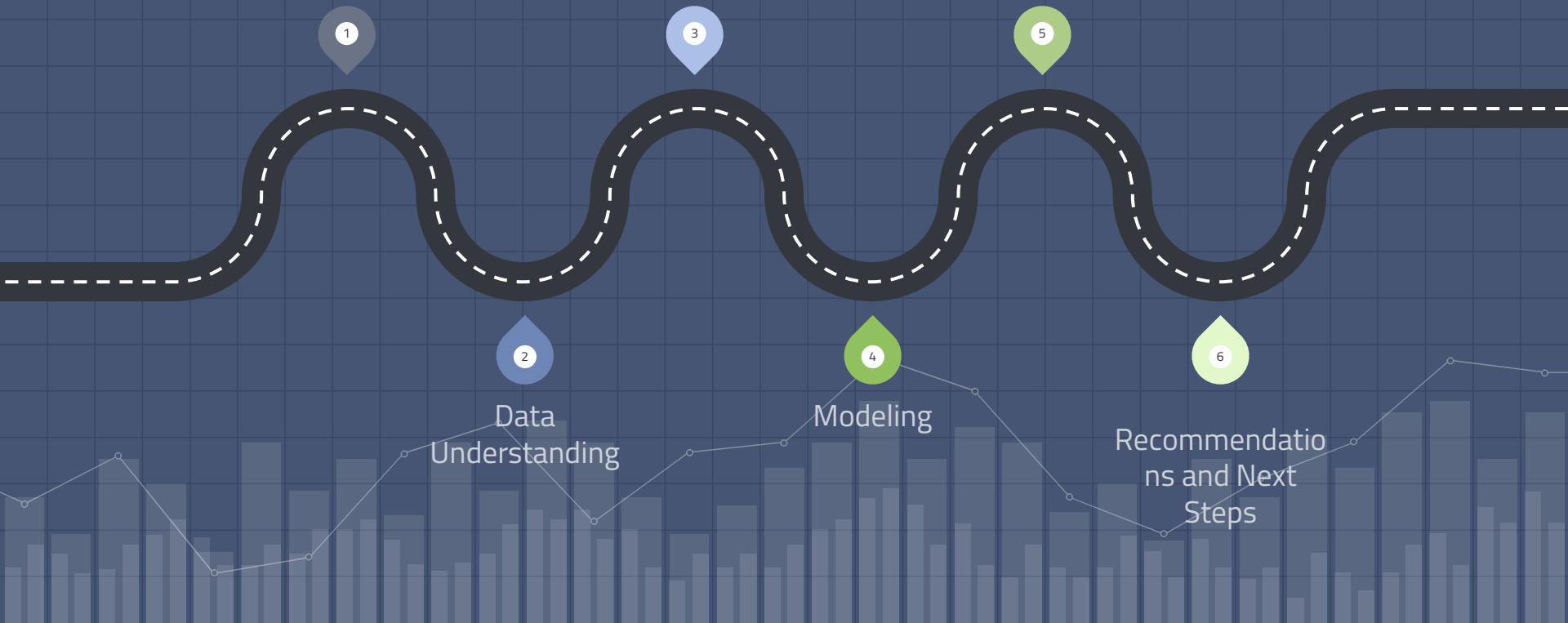
Data  
Understanding

4

Modeling

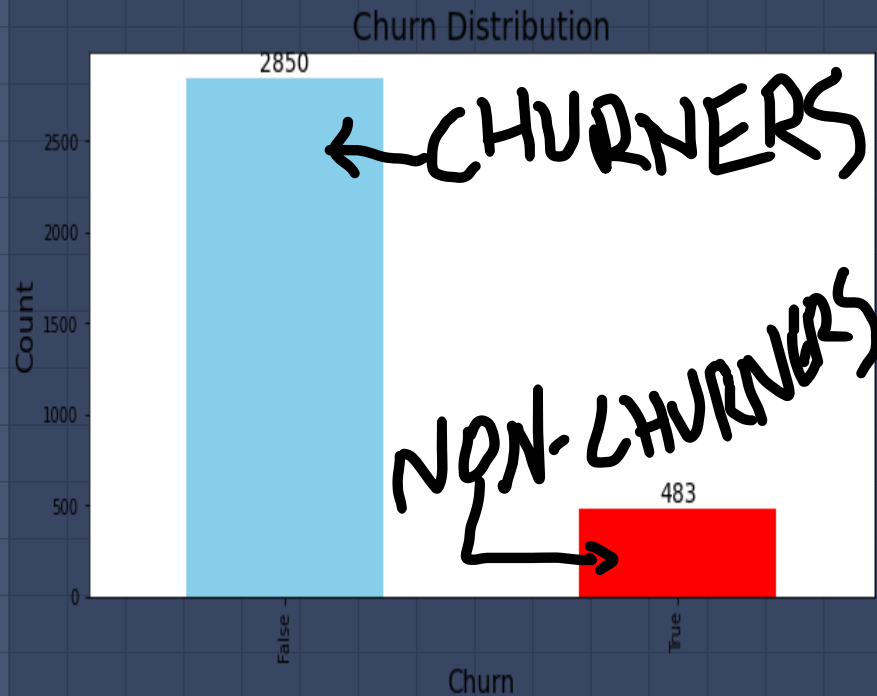
6

Recommendations and Next  
Steps



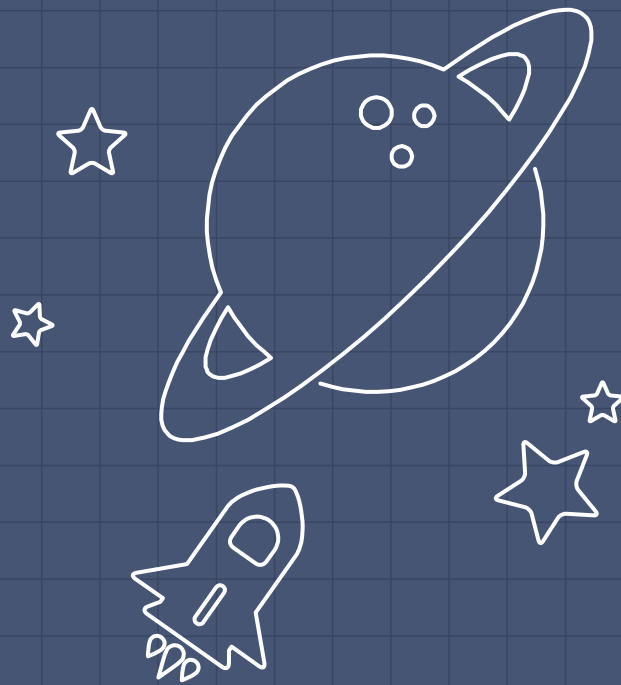
# Data

- 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

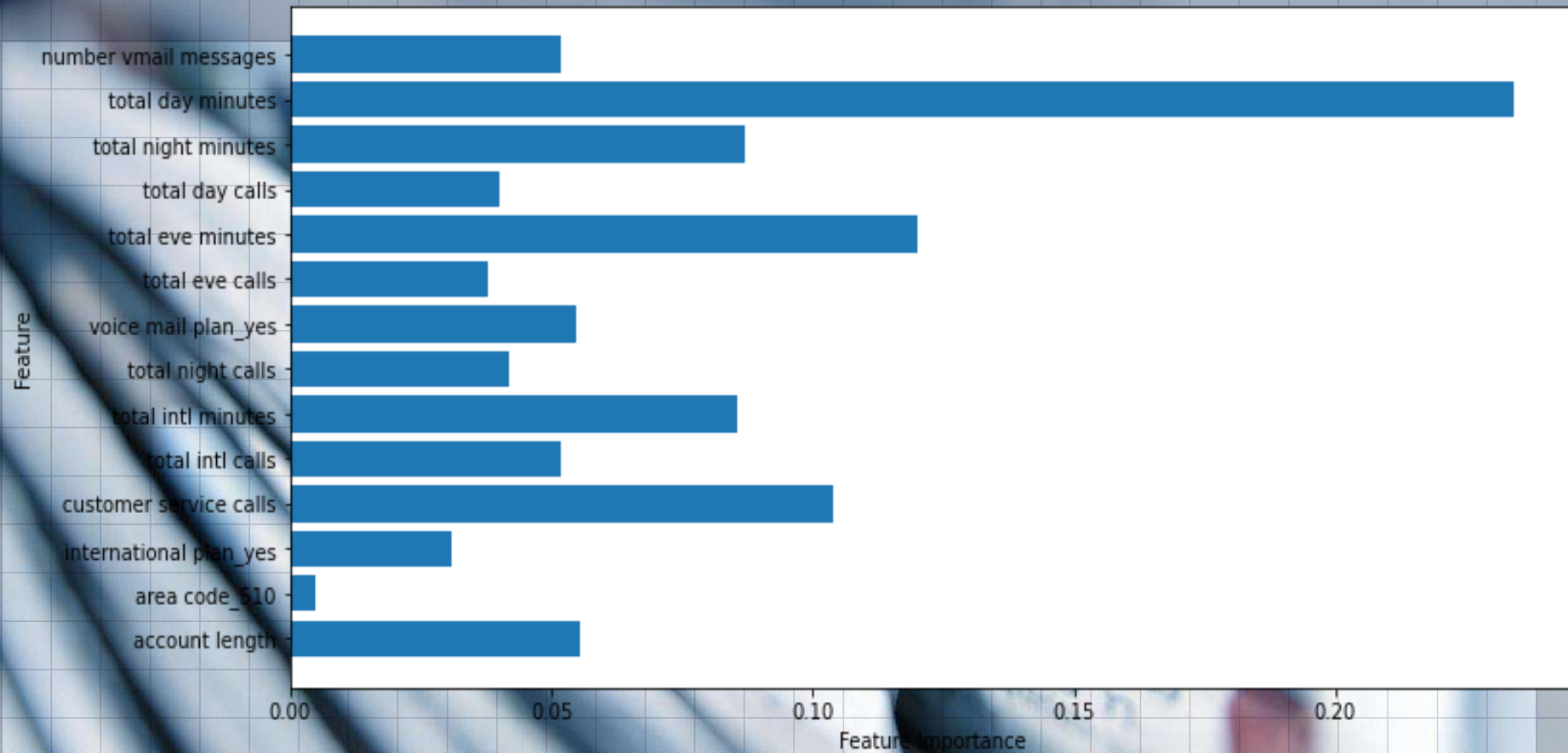
Precision score - 0.47

Accuracy score - 0.83

**BEST MODEL**

A decorative background graphic at the bottom of the slide. It features a white line graph with circular markers at various points, showing an overall upward trend. Below the line graph is a series of vertical bars of varying heights, creating a bar chart effect. The entire graphic is rendered in a light gray color against the dark blue grid background.





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?**

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