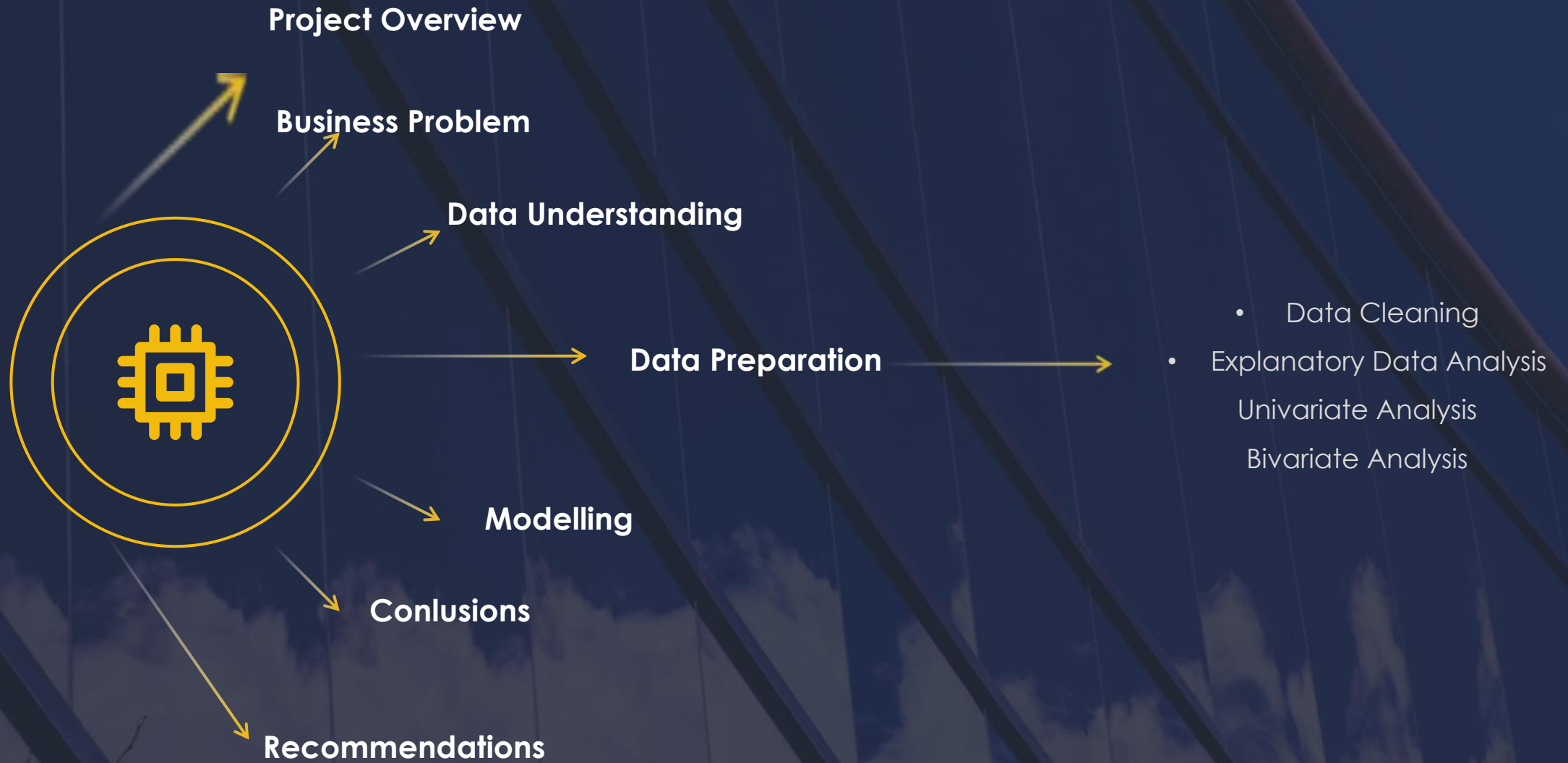


Customer Churn Prediction

Author:Lynn
Komen

Enjoy my
presentation

The Process





14.49%

Customer
Churn Rate

Project Overview

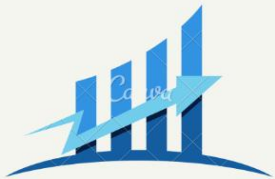
SyriaTel faces a challenge with customer churn, impacting revenue and market standing. This project aims to predict churn using key features like customer service calls, daytime call minutes, and international plan subscriptions



Business Problem

SyriaTel, is a telecommunications company facing a significant challenge: customer churn. They've noticed an increasing number of customers leaving their service, which is not only impacting their revenue but also their reputation in the market

Data Understanding



DATA
I am from kaggle and I have 20 features

Syrial Tel dataset Contains data about customer usage, calls and charges with churn column as the target variable



The data contains :
3333 rows
21 columns

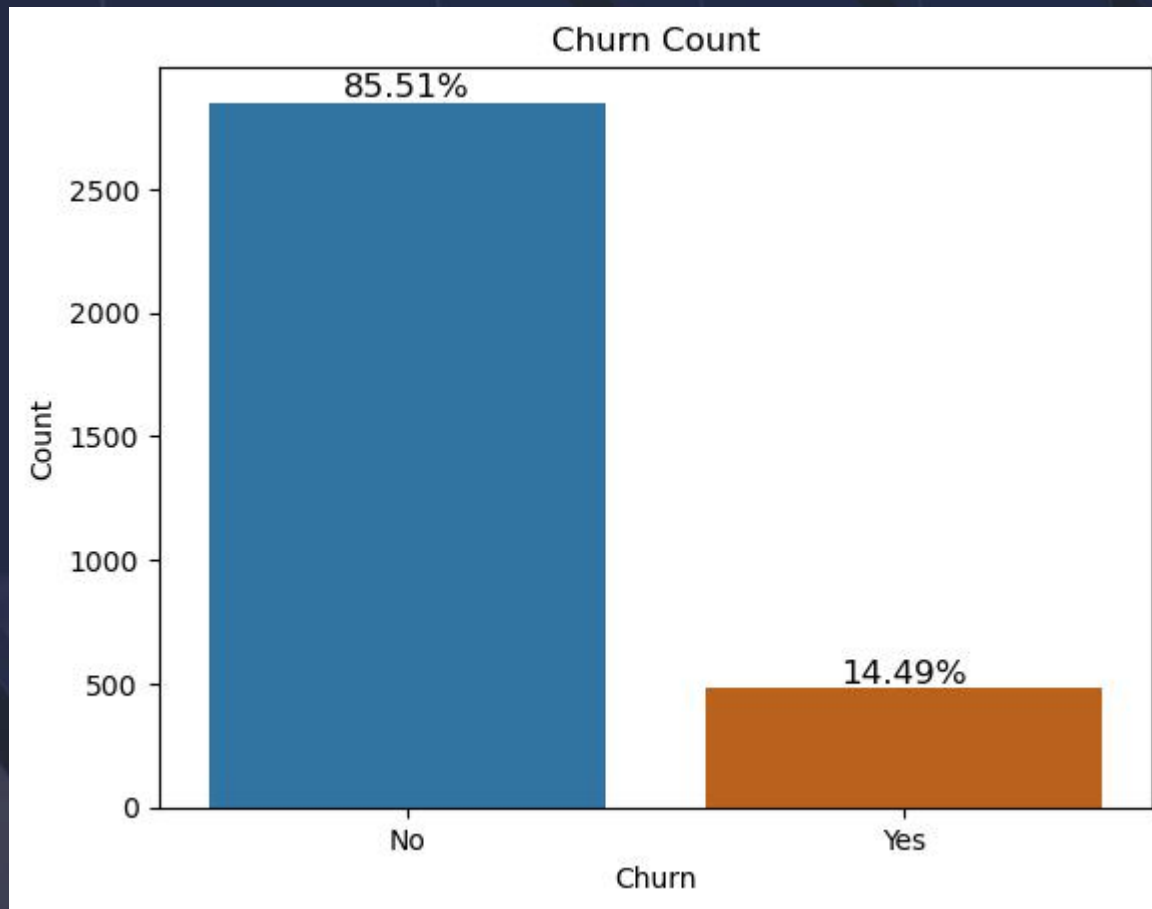


The datatypes of the column includes:

- int64
- object
- bool
- object
- int32

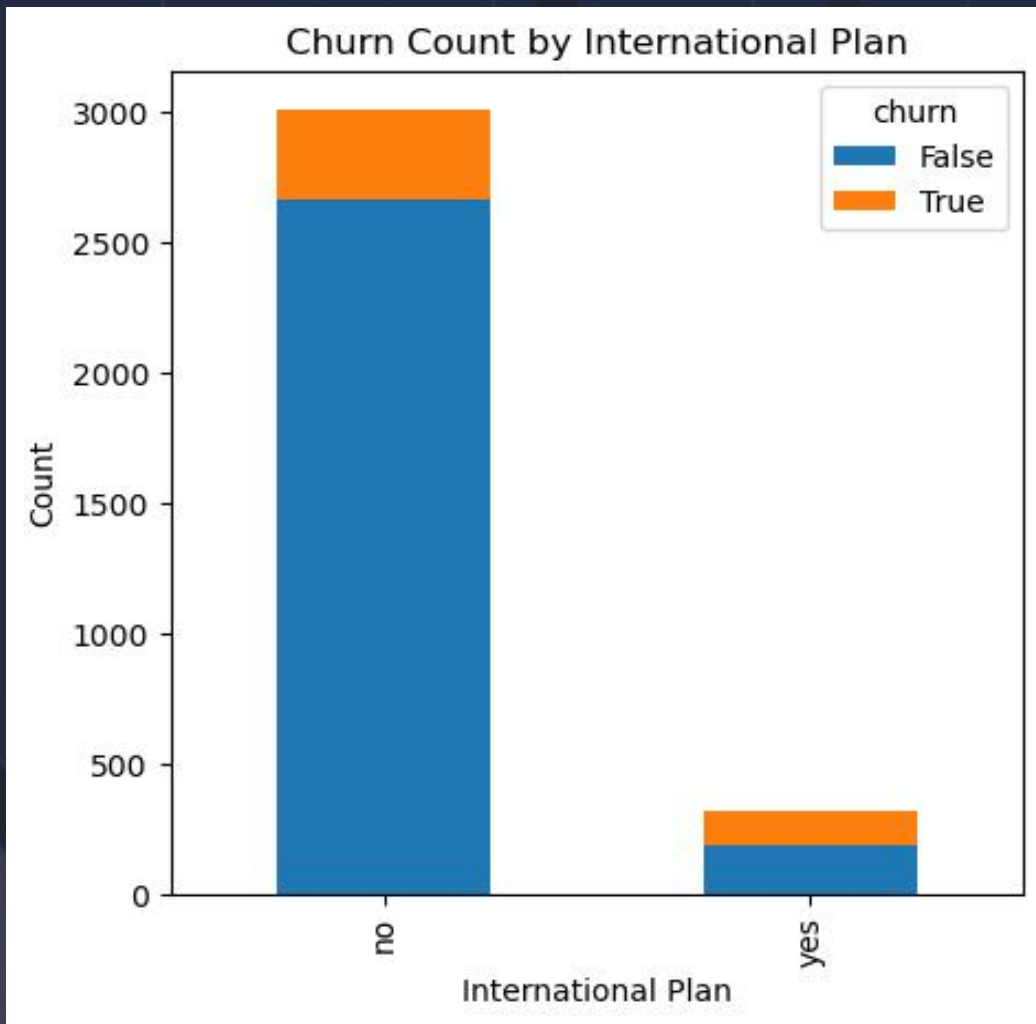
EXPLANATORY DATA ANALYSIS

This shows that SyriaTel Telecommunication Comapny has a 14.49% churn rate



*Customer churn
rate*

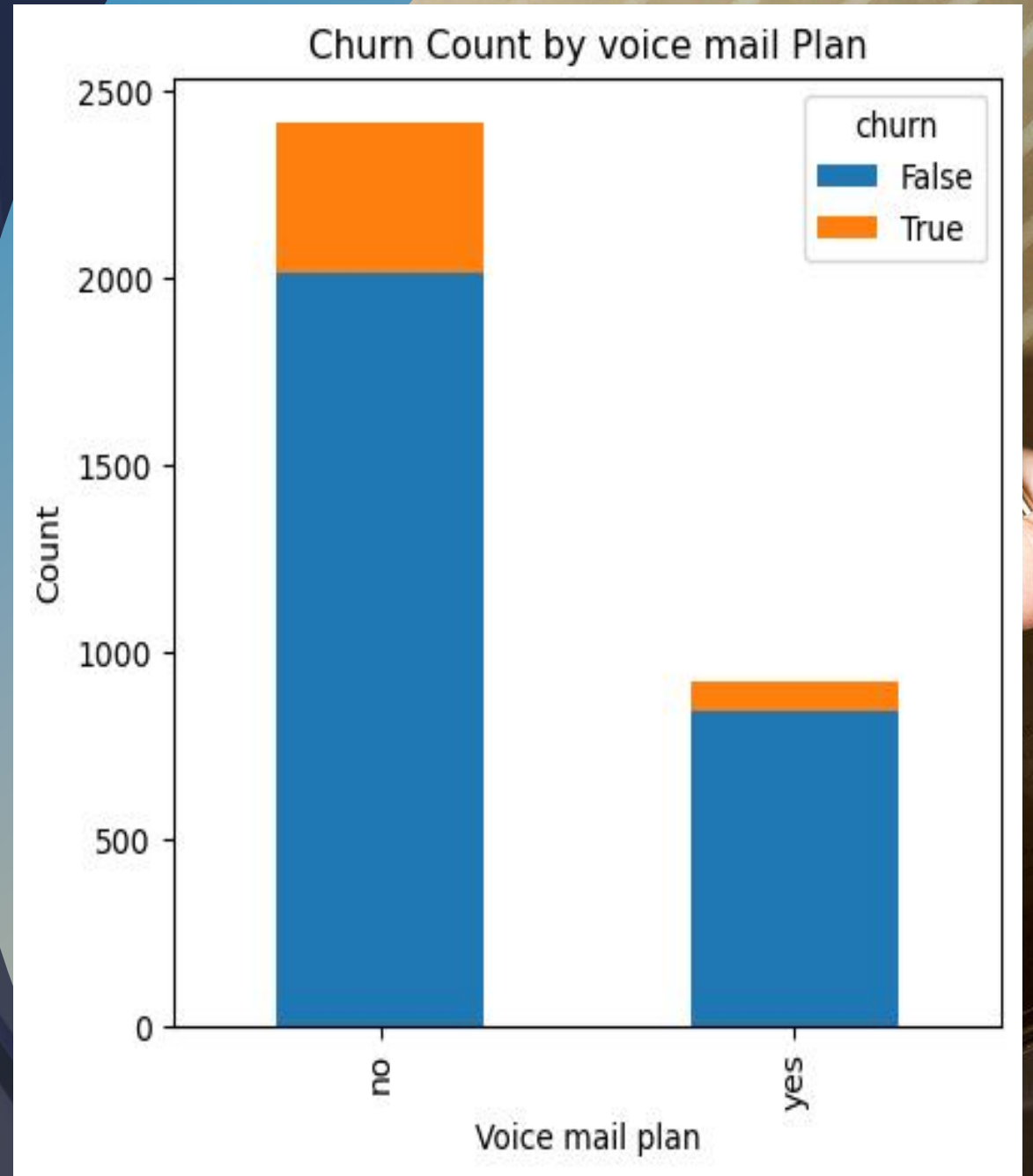
Churn by international plan



People with an international plan tend to churn more than people with no international plan. It is also evident that most customers in Syria Tel have no international plan.

Churn by voice mail plan

Customers with no voice mail plan tend to churn more than customers with voice mail plan



MODELS USED



Models Evaluation

This are the results of my models explained by the ROC-AUC curve

**76.4
%**

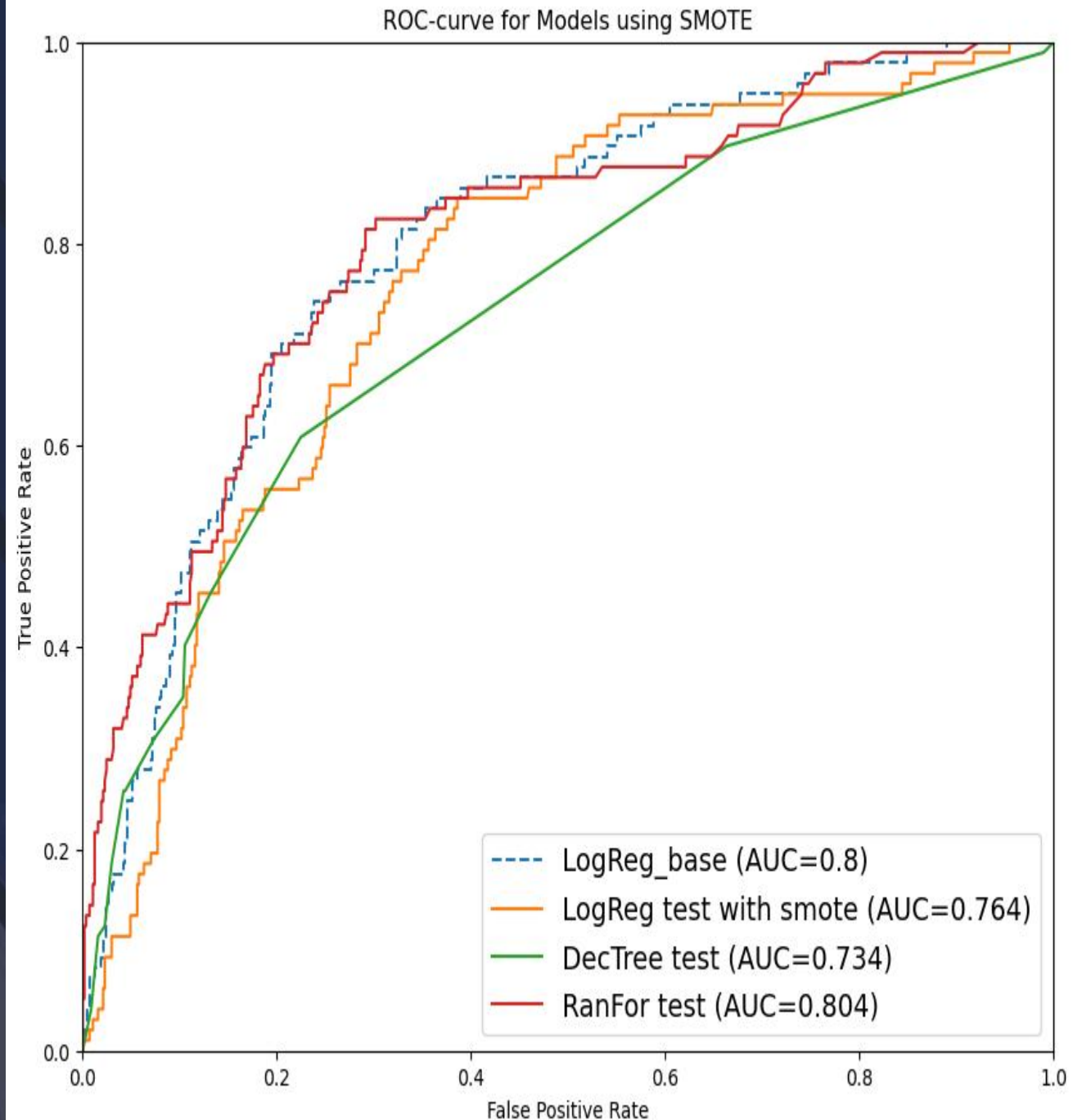
Logistic
regression
model with
smotel

80%

Logistic
REgression
Baseline
model

**80.4
%**

Random
Forest
regressor
model



Conclusion

The best model, The random classifier Model, achieved 80.4% accuracy. The most influential features were whether the client had an internal plan, the total minutes talked during the day, and the number of customer service calls. These features significantly contributed to the model's predictive power and overall performance

”



Recommendations

- **Recommendation 1**

Focus marketing efforts on clients with internal plans to increase retention and satisfaction through targeted incentives.

- **Recommendation 2**

Monitor and optimize daily call minutes, offering tailored plans for heavy users to improve customer experience.

- **Recommendation 3**

Enhance customer service quality, reducing the number of calls by addressing common issues effectively and proactively.

NEXT STEPS



NEXT STEPS
Of the SyriaTel Company

- **Step 1**

Integrating datetime data enables temporal analysis, tracking trends, and identifying seasonality in customer interactions for actionable insights.

- **Step 2**

Leveraging NLP models extracts sentiment and topics from customer feedback, correlating sentiments with churn, satisfaction, and preferences.

- **step 3**

Continuous monitoring, iteration, and automation ensure effectiveness, enabling refinement and optimization of analysis and modeling processes.



Thank you