Syria Tel

Customer Churn prediction

Predicticting wether a customer will churn or not

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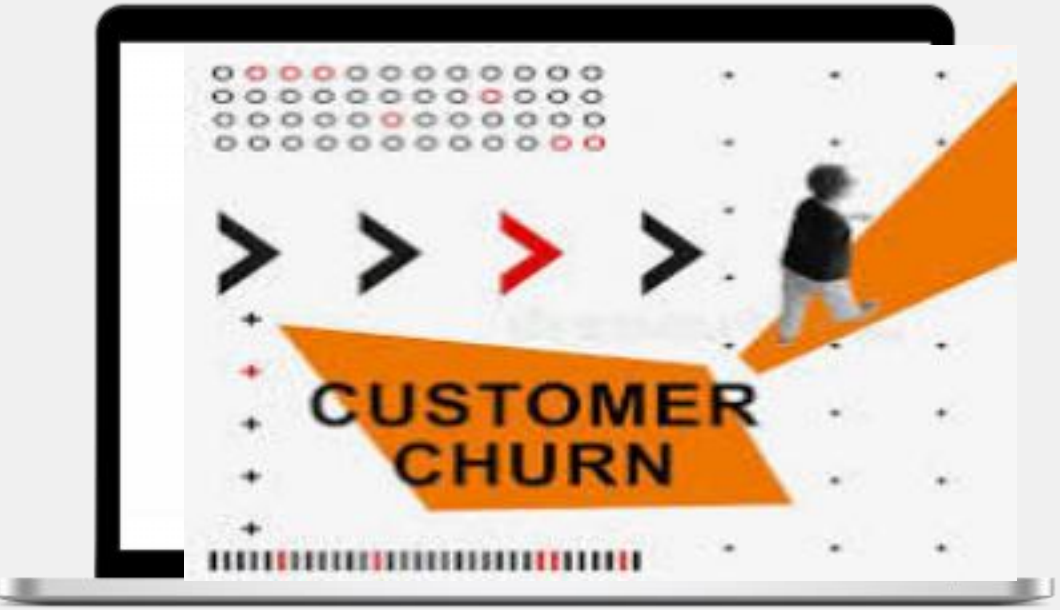
Project Overview

SyriaTel, a telecommunications company faces major issues in retaining its customers.SyriaTel Company has a high churn rate of 14.49% .This churn rate has reduced its revenue and also has made the comapny face very high competition from other Telecommunication companies. Due to this impact the company has hired me to analyse their past data and come up with business insights and new strategies of reducing the customer churn rate.The aim of this project is to analyze past data of SyriaTel telecommunication company and come up with machine learning algorithms to predict whether a customer will churn or not

Business Problem



This project is about analyzing Syria Tel historical data and building models that will predict wether a customer is likely to churn or not and what features contribute to customer churning away from the SyriaTel company.

Main problems addressed by this project are:

- Revenue loss by SyriaTel
- Customer Dissatisfaction

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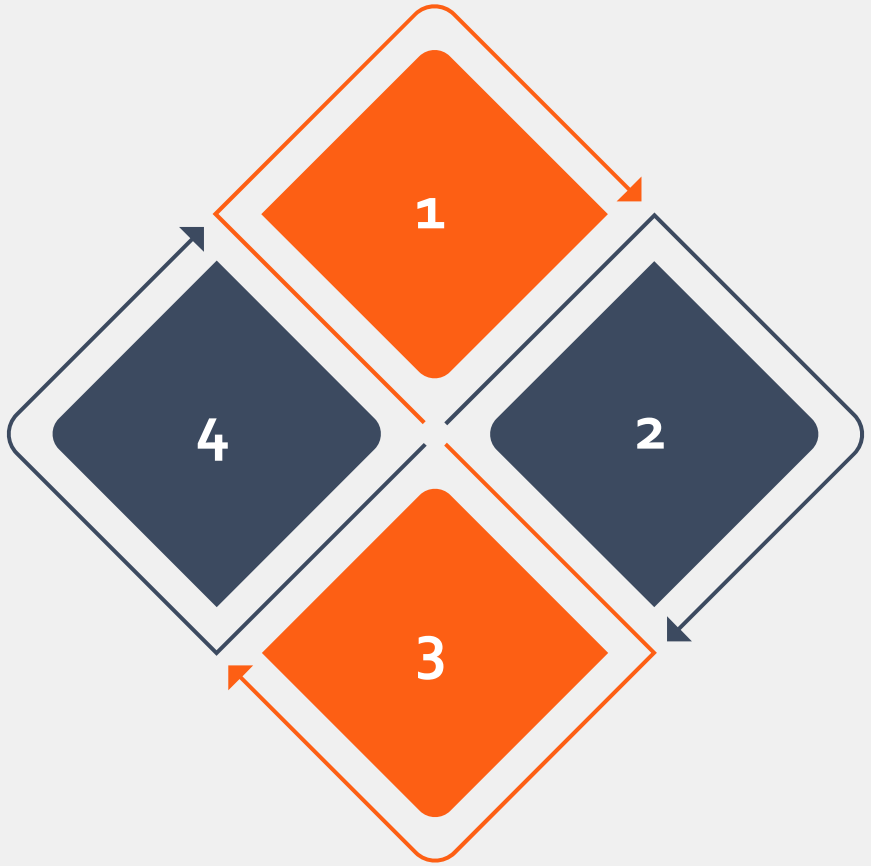
Revenue loss by Syria Tel

Customer Dissatifaction

Data

Source

The dataset is from kaggle



Features

- **Target Variable**: Churn
- **Predictors variables**:eg, International Plan, Voice mail Plan, The minutes, Charges

Dataset Description

The dataset has 21 columns and 3333 rows.

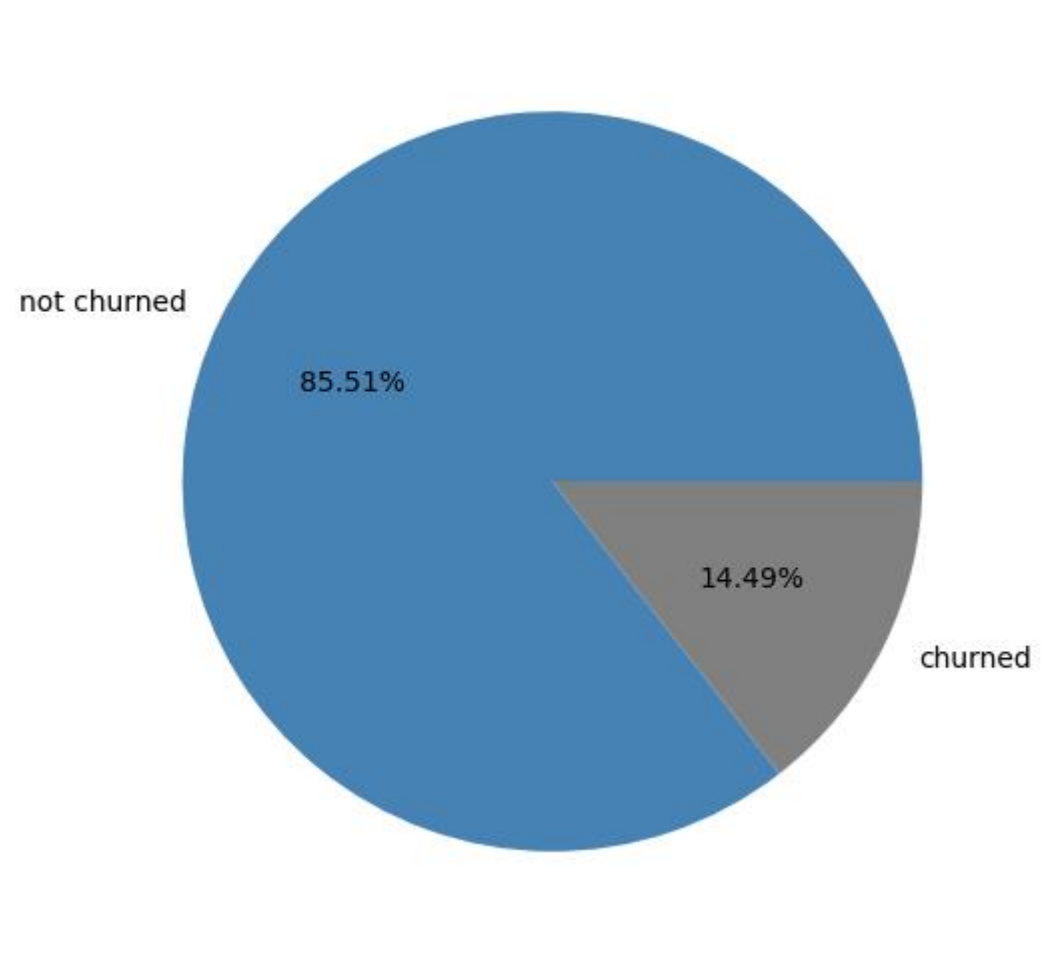
Visualization Used

- Boxplots
- Histograms
- Heatmap
- Countplot.

FINDINGS

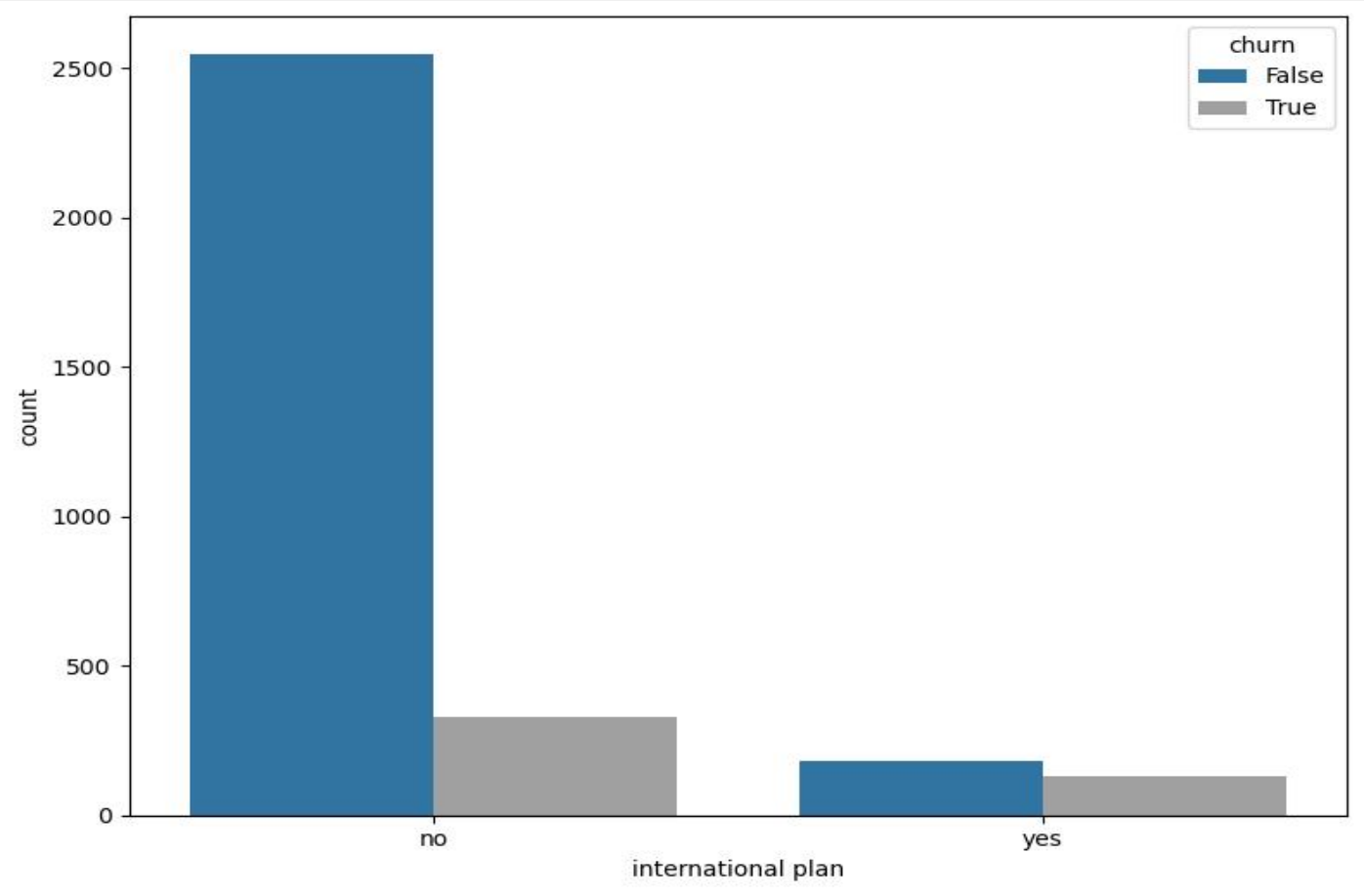
from my analysis

Churn Rate



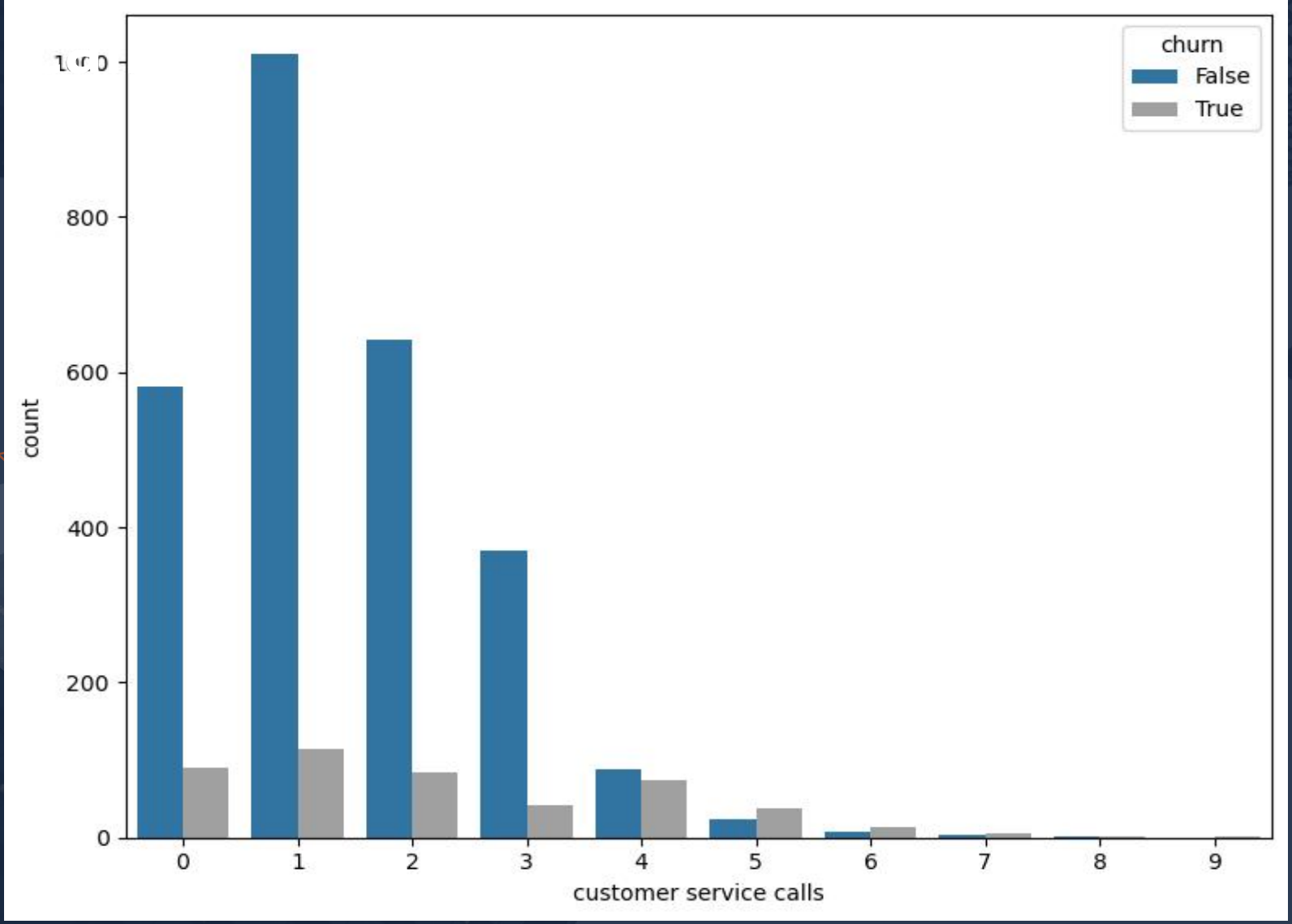
Telecom has 14.49% churn rate

International Plan



Customers with no international plan churn more than customers with an international plan even though it seems some customers with an international plan still churn away from the company

Customer Service

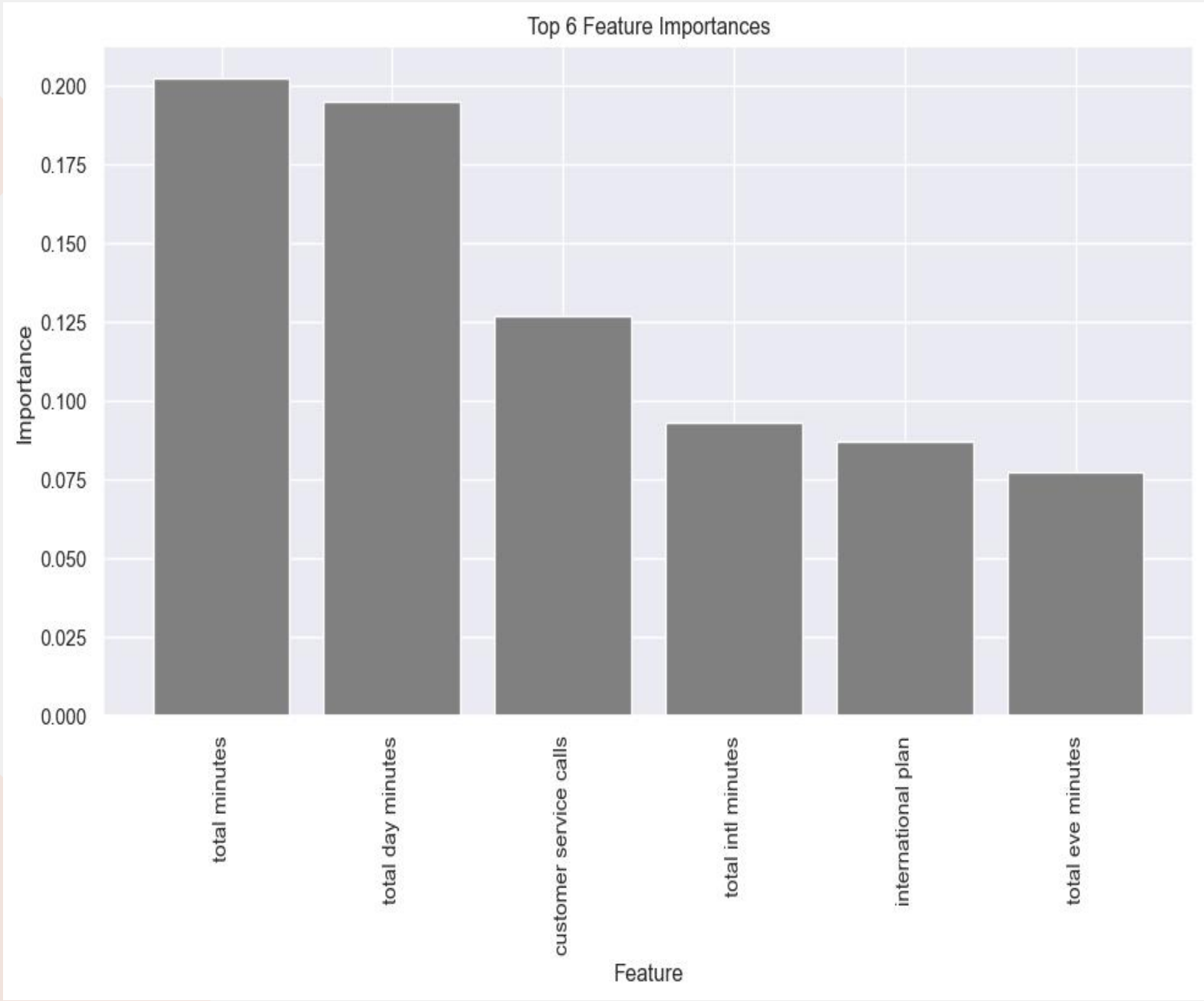


Most customers who make 0,1,2 to the Syria Tel Telecommunication churn most

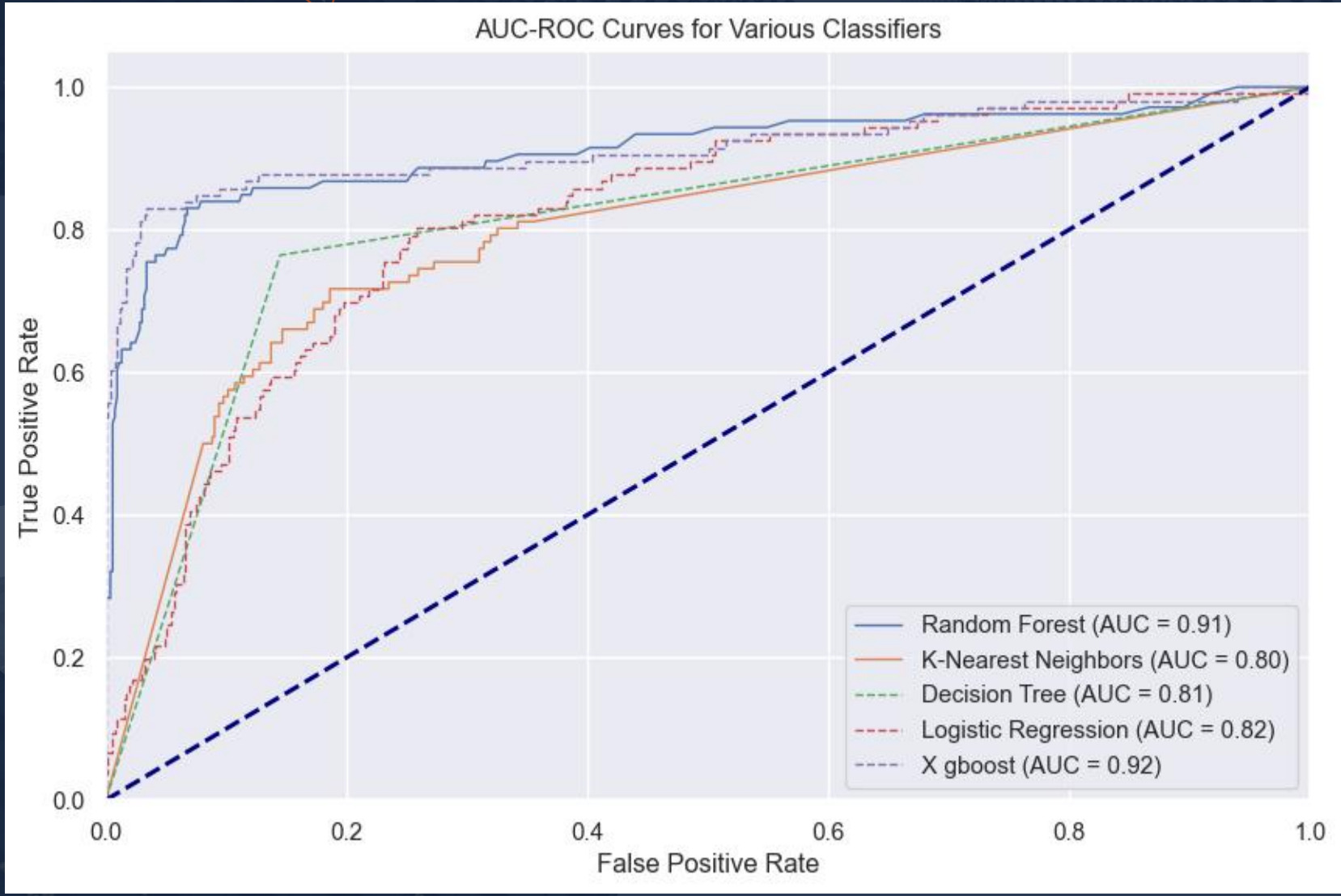
Findings

Powerful Predicting features

The most important features identified by the model are `customer service calls`, `total minutes`, `total day minutes`, `total intl calls`, `total intl minutes`, and `total eve minutes`,`international plan`. These features play a crucial role in predicting whether a customer will churn or not.



The Best model is the Xgboost Model



My Xgboost model has predicted 19.74% customer churn rate.Putting in place my best performing features.`customer service calls`, `total minutes`, `total day minutes`, `total intl calls`, `total intl minutes`, and `total eve minutes`,`international plan`. These features play a crucial role in predicting whether a customer will churn or not.

Conclusion

01

Model Performance: The XGBoost model achieved a high accuracy of approximately 94%, indicating that it performs well in predicting customer churn.

02

Important Features: The most important features identified by the model are `customer service calls`, `total minutes`, `total day minutes`, `total intl calls`, `total intl minutes`, and `total eve minutes`,`international plan`. These features play a crucial role in predicting whether a customer will churn or not.

Recommendations

Recommendations

01

Focus on Customer Service: The number of customer service calls appears to be a significant predictor of churn. It's essential to pay attention to customer complaints and issues promptly to address their concerns and improve satisfaction

02

Analyze Usage Patterns: Total usage minutes during different times of the day ('total day minutes', 'total eve minutes', 'total intl minutes') and the number of international calls ('total intl calls') can provide insights into customers' usage patterns

03

Proactive Communication: Implement proactive communication strategies to engage with customers before they consider churning

04

Continuous Monitoring: Continuously monitor customer behavior and feedback to identify emerging trends and adjust retention strategies accordingly

Next Steps

Monitor strategies, track churn, satisfaction, usage. Adjust based on insights, feedback, performance evaluation regularly.

Explore additional data sources or collect more data to enhance the predictive capabilities of the model

Gather customer feedback regularly to improve services, create new offerings, and strengthen relationships

Create a lasting plan for keeping customers by building strong relationships, encouraging loyalty, and providing great experiences

THANK YOU

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