# SyriaTel Customer Churn

# Overview

The telecommunication sector is a dynamic industry characterized by network infrastructure,technological innovation and global connectivity.However,customers may switch from one telecommunication service to another or they may discontinue the service altogether,a phenomenon called 'Telecom churn'.Telecom churn analysis is a crucial aspect of business intelligence for telecommunication companies as it helps them understand why customers are leaving and what actions can be taken to reduce churn rates.In this project,we are looking to provide predictive and actionable insights regarding likely churn candidates at the telecommunications company SyriaTel. We hope to create a complex model that can predict likely churn candidates as well as the features that impact churn the most.

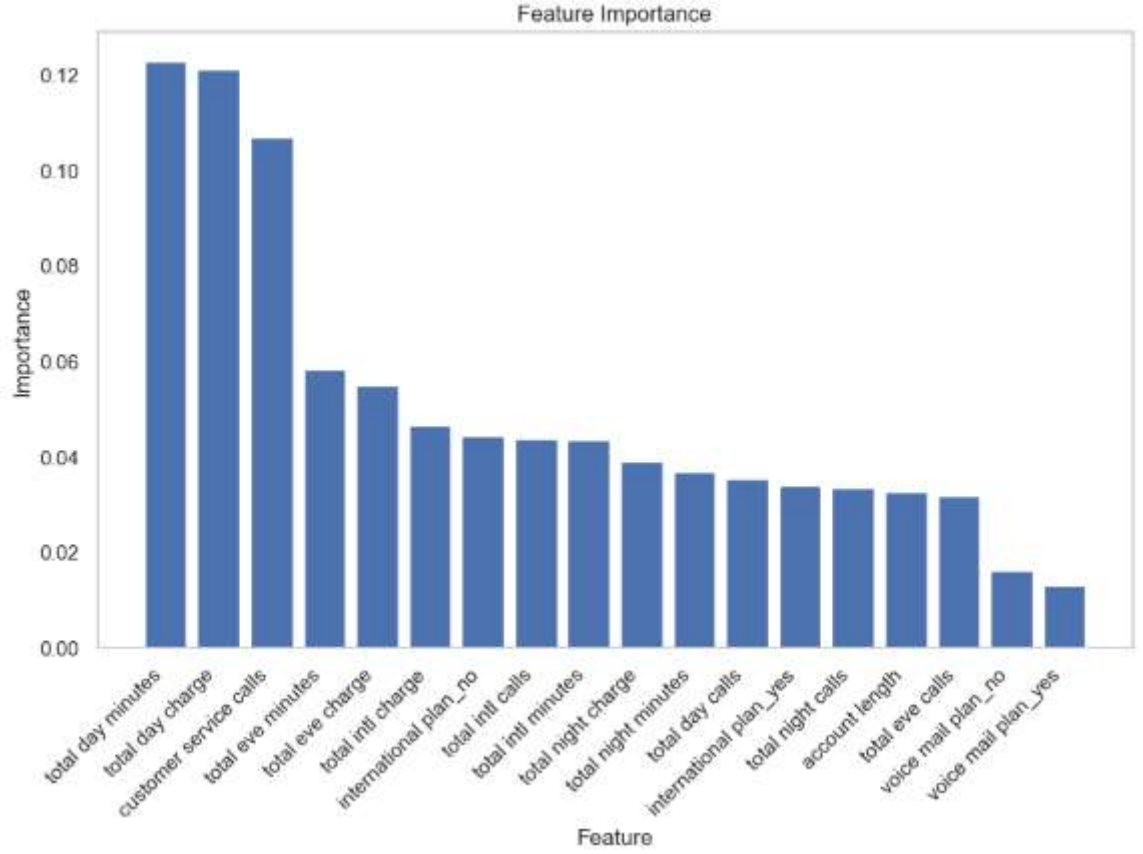
# Business Understanding

The primary goal of this project is to to unlock actionable insights that will empower SyriaTel to implement targeted strategies to mitigate customer churn, ultimately fostering long-term business sustainability.To achieve this objective we need to develop a model that can identify the key factors influencing telecom churn. To effectively train this model, the client requires precise and representative data related to the customers of this telecommunications company.  Once trained the model will be capable of providing accurate predictions on whether customers will churn or not. .

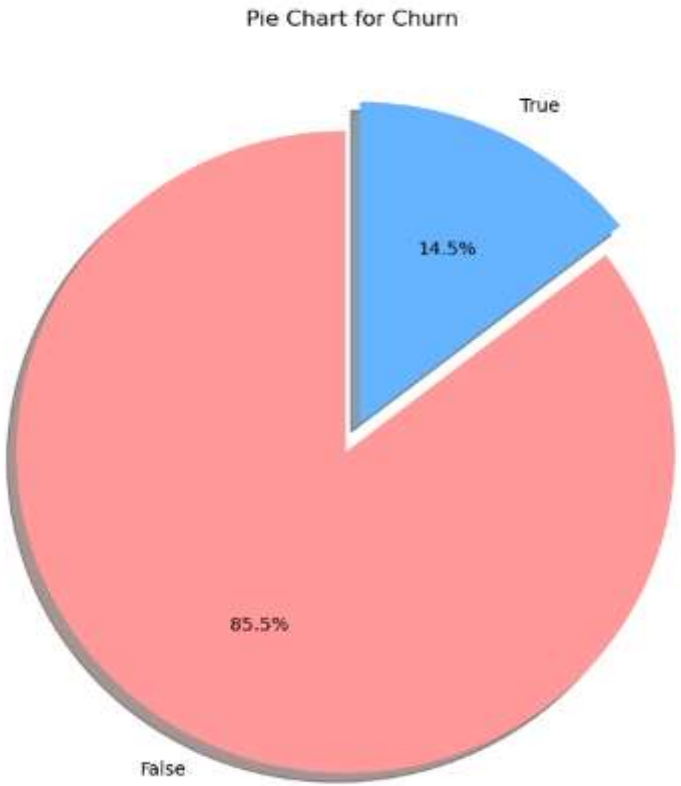
# Objectives

- To identify the features of the SyriaTel dataset which are the most significant predictors of customer churn.
- To compare the ability of different classification models to predict customer churn.
- To provide insights into how SyriaTel can mitigate customer churn.

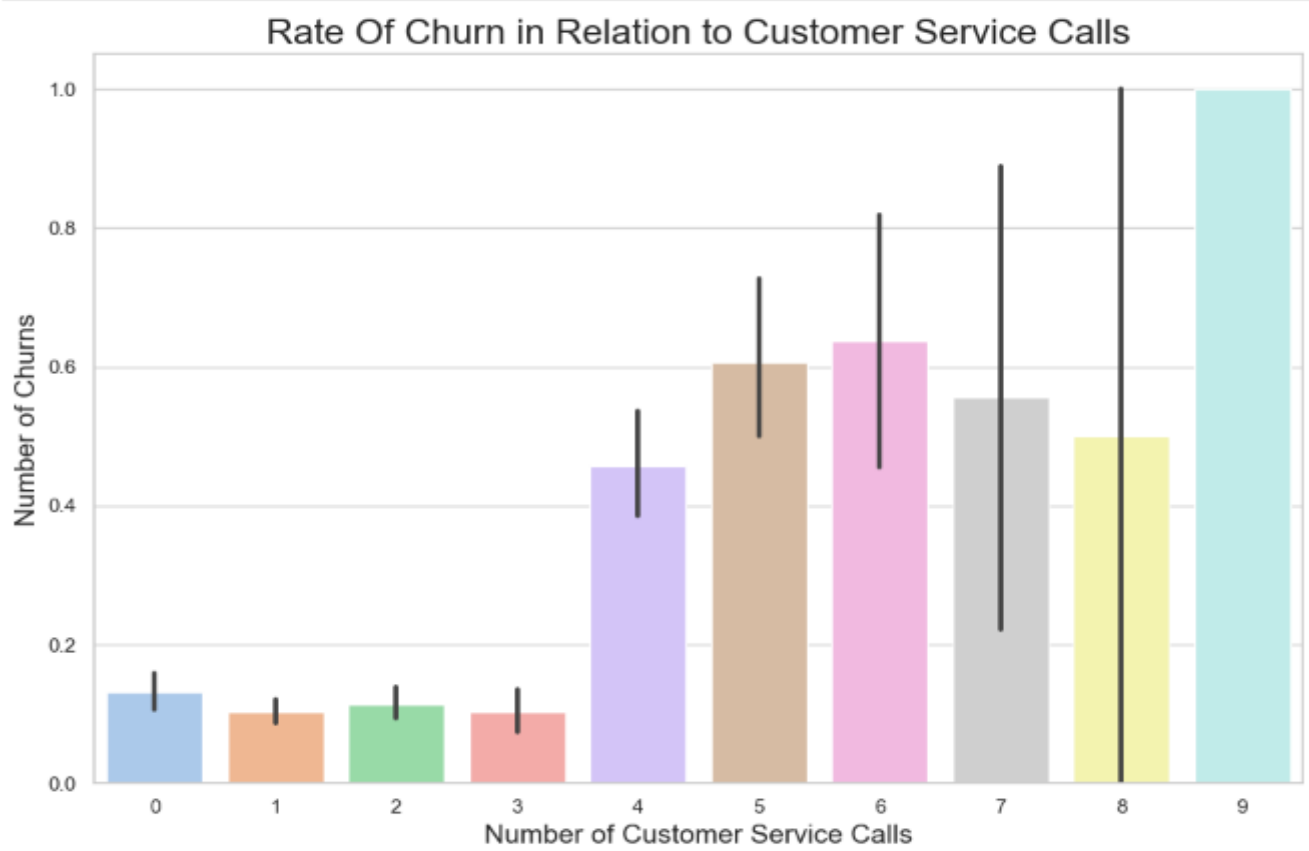
# Feature Importance



# Pie Chart For Churn



# Relationship between churn/customer service calls



# Conclusion

We can now conclude that a random forest model provides better insights into this dataset than a decision tree or a logistic regression model,even without tuned hyperparameters.The feature importance bar graph shows that total day minutes,total day charge and customer service calls are the features which influence whether customers churn or not.

# Recommendations

- Improve their products' reliability to reduce the number of customer service calls.Once customers call 4/5 times plus,they are likely to churn.
- Promote their products more aggressively in the states of New Jersey,Texas,Maryland,Michigan and New York.A huge number of their churned customers reside in these states.
- Reduce their charges for international calls.Not many of the customers have an international plan.
- Provide discounts on charges for day calls as it influences whether customers churn or not significantly.

# THANK YOU