PHASE 3 PROJECT

TELECOMMUNICATION CHURN DATA ANALYSIS

AUTHOR: LUCY NJAMBI

BUSINESS UNDERSTANDING:

> A telecommunication company aims at reducing cost by minimizing cost associated with customers who end up discontinuing their subscription services.

>The main goals of the model and analysis is to improve subscribers satisfaction , through deriving insights from subscribers patterns, behaviors and preferences.

>Additionally, the analysis aim at expanding the customer base by tailoring services that will attract new subscribers.

DATA UNDERSTANDING:

>The dataset contains a record of customers and comprehensive subscriber-related attributes associated to the services offered by the company.
>This dataset allows us to perform analysis and identify patterns, major factors that lead to customer churns.
>Additionally, the dataset will be useful in creating a model that will improve customer experience and improve customer retention.

OBJECTIVES:

1.Identify the attributes and services that have a higher likelihood of leading a client to churn the company

2.Determine the possible measures that can be implemented to ensure that the clients don't churn the company

3.Develop a model that identifies the customers population that is likely to be at risk of churning and develop measures to mitigate the churning
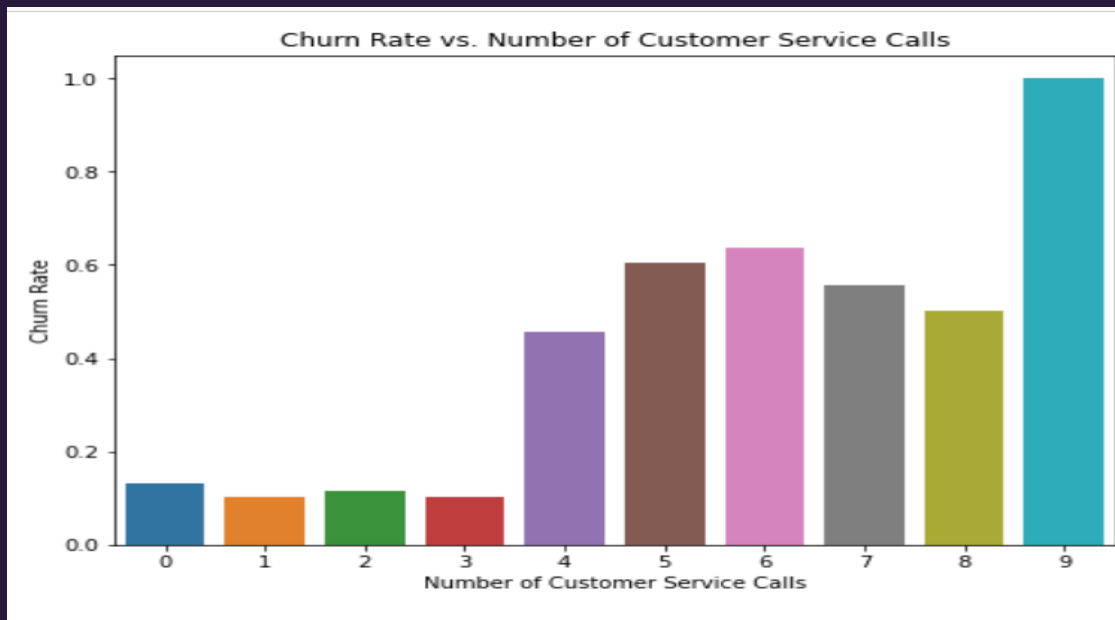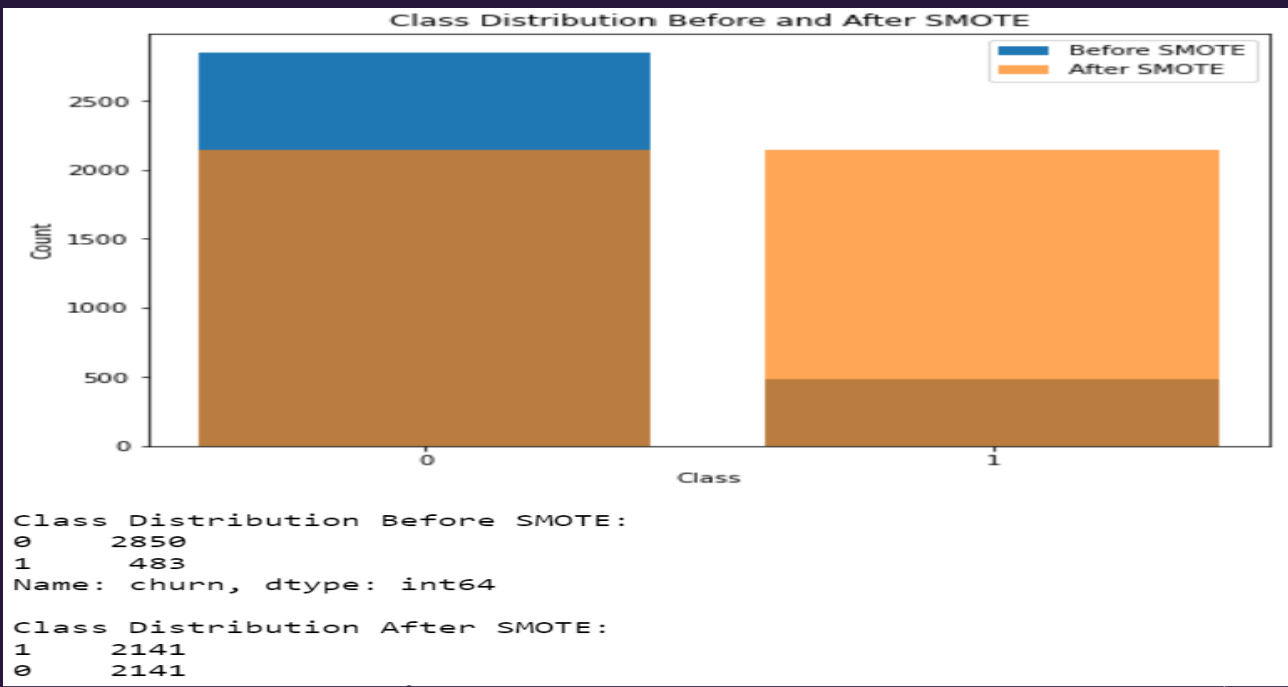
DATA ANALYSIS:

Relationship between customer service calls and the subscribers churn rate.
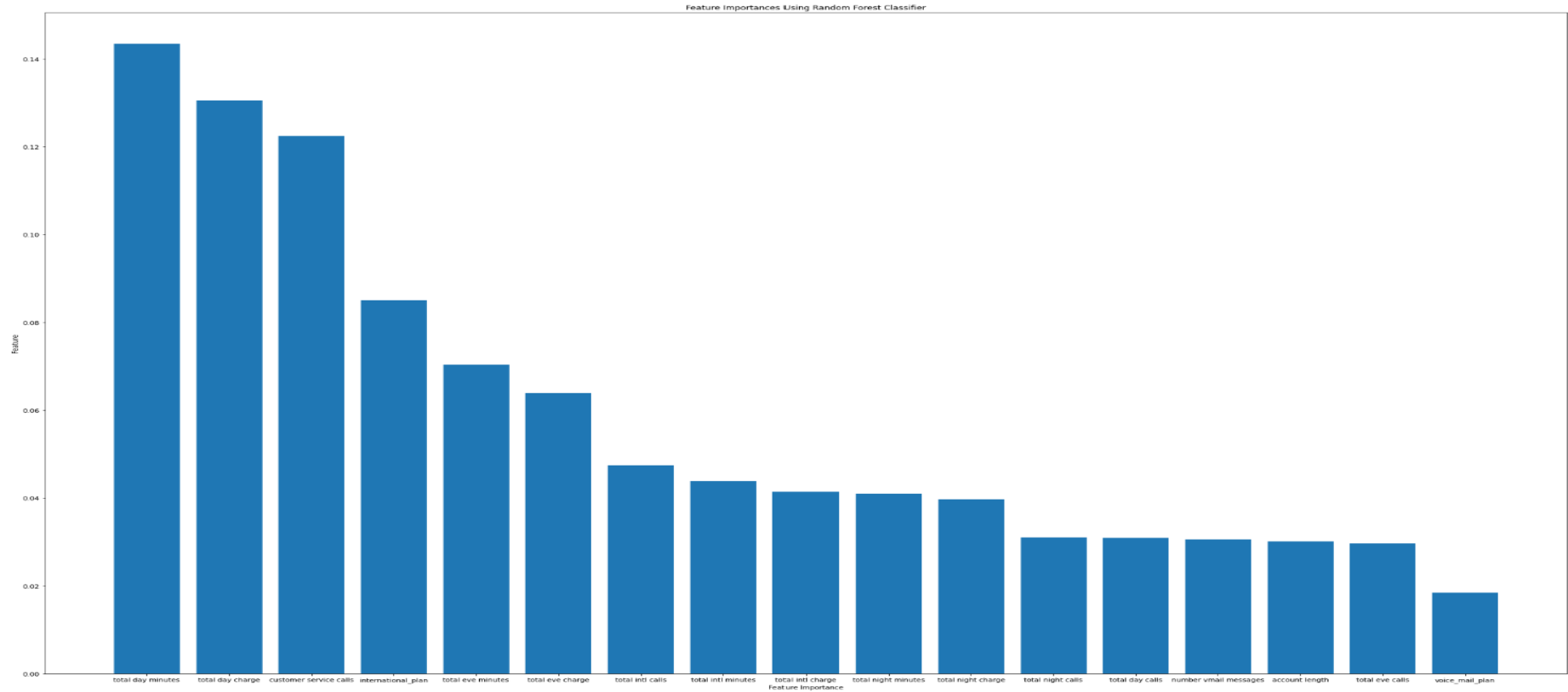
DATA ANALYSIS:

Distribution of churn outcome
Before and after appling the SMOTE
Technique

Class Distribution Before and After SMOTE

```
Class Distribution Before SMOTE:
0      2850
1       483
Name: churn, dtype: int64

Class Distribution After SMOTE:
1      2141
0      2141
```

Feature Importances Using Random Forest Classifier

CONT….

The top five services may influence the decision of a subscriber to churn or not churn the company are:

1. total day minutes
2. total day charge
3. customer service calls
4. international_plan
5. total eve minutes

OBJECTIVE 2:

The following measures can be implemented to ensure that the clients dont churn the company:

>1.Offer affordable subscription plans for day calling:Total day minutes and charges have the highest importance, offering an affordable plan will retain the existing subscribers as well as attract more. Hence giving the company an edge in the competitive telecom industry.

>2.Improve customer experience. Customer service calls have a relatively high importance. Addressing and resolving subscribers' issues may have a significant effect on whether or not the subscribers churn the service provider.

>3.Offering pesonalized plans for different subscribers categories eg a competitive and affordable plan for the international plan subscribers.

>4.Continuous market analysis and modelling: Keeping up with the market trends and developing models that will predict the likelihood of subscribers churning the service provider is paramount and should be conducted continuously. This will give the company a competitive edge over competitors.

RECOMMENDATION 1:

Understanding Subscriber needs:

>Subscriber needs are influenced by various factors, including demographics, age, preferences, and emerging trends. To enhance subscriber satisfaction and retention, conduct in-depth research to understand their unique needs. This insight can inform the development of tailored subscription plans that address clients' specific requirements, ultimately improving the quality of service. the subscription plans curated by the company to cater for clients needs and as a result, improve the quality of service.

RECOMMENDATION 2:

Continuous Modelling and market trends analysis.

>To maintain competitiveness, it's essential to continuously analyze market trends and predict subscriber behavior. Regularly monitor shifts in the industry and consumer preferences. Develop predictive models that assess the likelihood of subscriber churn. Leverage on these insights to proactively address customer needs and expectations. Staying ahead of the curve in understanding and fulfilling customer requirements will set the company apart from competitors.

Thank You!