Capstone Project-1

Telecom Churn Analysis

By- Shubham Srivastava

Index

- Defining Problem Statement
- Dataset Summary
- EDA(Exploratory Data Analysis)
- Conclusion

Problem Statement

Orange S.A., formerly France Telecom S.A., is a French multinational telecommunications corporation. The Orange Telecom's Churn Dataset, consists of cleaned customer activity data (features), along with a churn label specifying whether a customer canceled the subscription.

Explore and analyze the data to discover key factors responsible for customer churn and come up with ways/recommendations to ensure customer retention.

According to Wikipedia, churn rate or customer churn when applied to a customer base, refers to the proportion of contractual customers or subscribers who leave a supplier during a given time period.

Dataset Summary

State: In this Telecom Churn Dataset, the data has 51 States given in which Orange S.A. has customers spread about.
DataType- Categorical
Account length: In the Dataset, it tells us about how long customer account has been active.
DataType- Numerical
Area code: In the Dataset, it shows the area code of the customer.
DataType- Numerical
International plan: It tells us whether a customer has subscribed to International plan or not.
DataType- Categorical

Dataset Summary

Voice mail plan: It tells us whether a customer has subscribed to Voice mail plan or not.
DataType- Categorical
Number vmail messages: It shows number of voice mail messages sent by customer.
DataType- Numerical
Total day minutes: It tells us number of minutes a customer spent on call in daytime.
DataType- Numerical
Total day calls: It tells us number of calls made by a customer in daytime.
DataType- Numerical

Dataset Summary

Total day charge: It tells us the charges incurred by a customer in daytime only.
DataType- Numerical
Total eve minutes: It tells us number of minutes a customer spent on call in evening.
DataType- Numerical
Total eve calls: It tells us number of calls made by a customer in evening.
DataType- Numerical
Total eve charge: It tells us the charges incurred by a customer in evening only.
DataType- Numerical

Dataset Summary

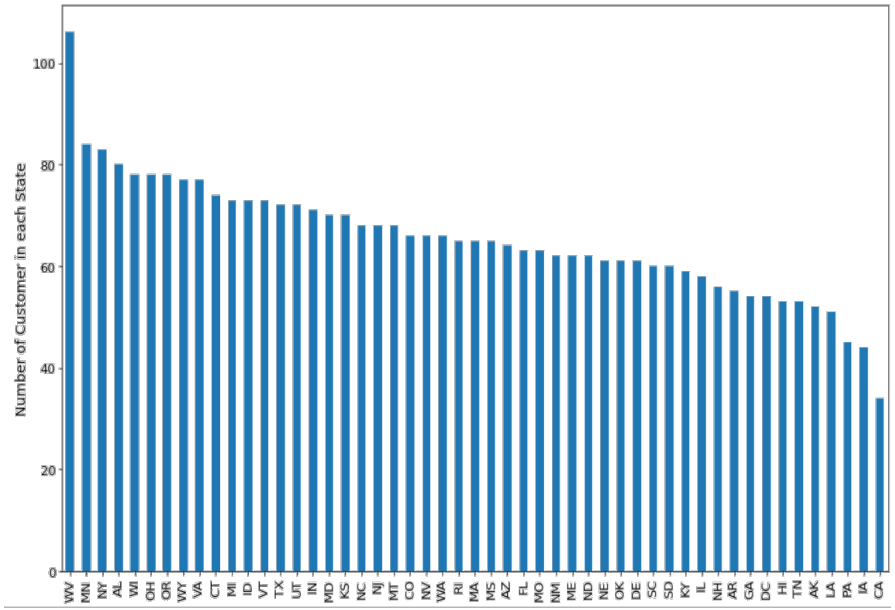
Total night minutes: It tells us number of minutes a customer spent on call in night time.
DataType- Numerical
Total night calls: It tells us number of calls made by a customer in night time.
DataType- Numerical
Total night charge: It tells us the charges incurred by a customer in night time only.
DataType- Numerical
Total intl minutes: It tells us number of minutes a customer spent on an International calls.
DataType- Numerical

Dataset Summary

Total intl calls: It tells us number of International calls made by a customer.
DataType- Numerical
Total intl charge: It tells us the charges incurred by a customer for making International calls.
DataType- Numerical
Customer service calls: It tells us number of times a customer called customer service.
DataType- Numerical
Churn: In this Dataset, churn tells us whether a customer is likely to discontinue telecom service.
DataType- Categorical

EDA(Exploratory Data Analysis)

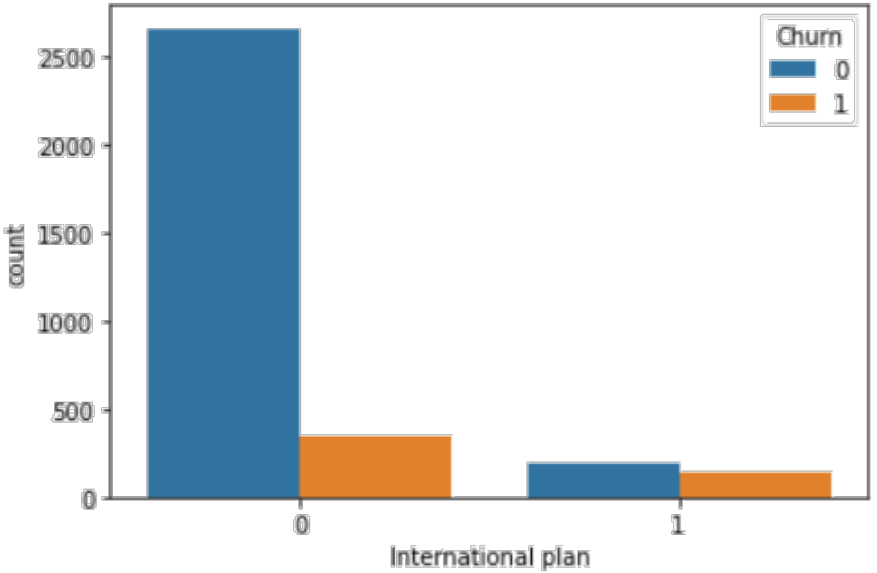
- There are 51 States in total , in which WV state has highest density of customers conversely, CA state has lowest density of customers.



EDA(Exploratory Data Analysis)

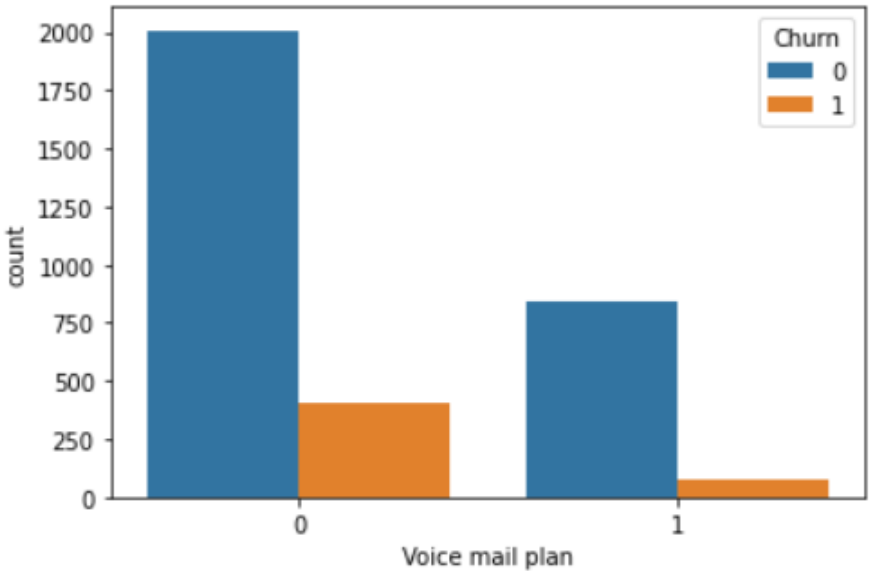
- Customer who subscribes International plan are less likely to churn than who don’t subscribe the plan.

- Customer who subscribes International plan are less likely to churn than voice mail plan.



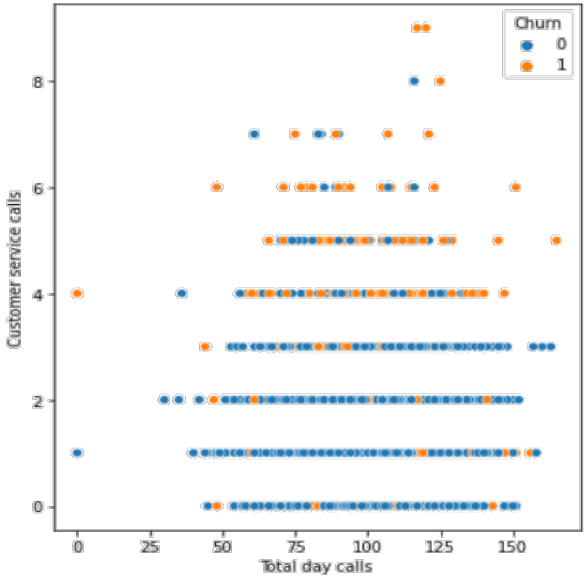
EDA(Exploratory Data Analysis)

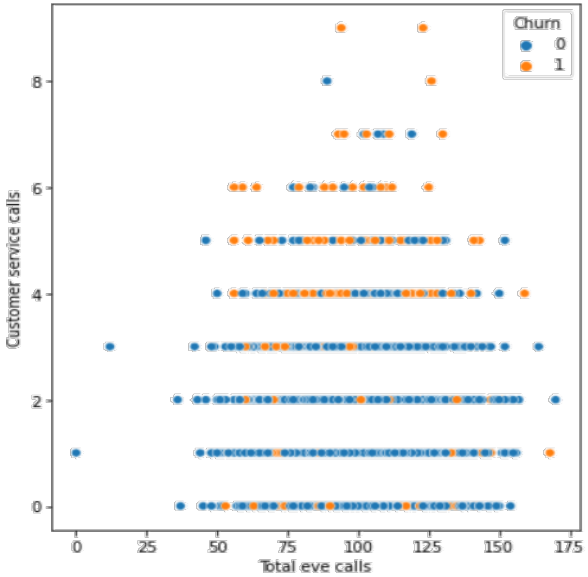
- **Customer who subscribes Voice mail plan are less likely to churn than who don’t subscribe the plan.**

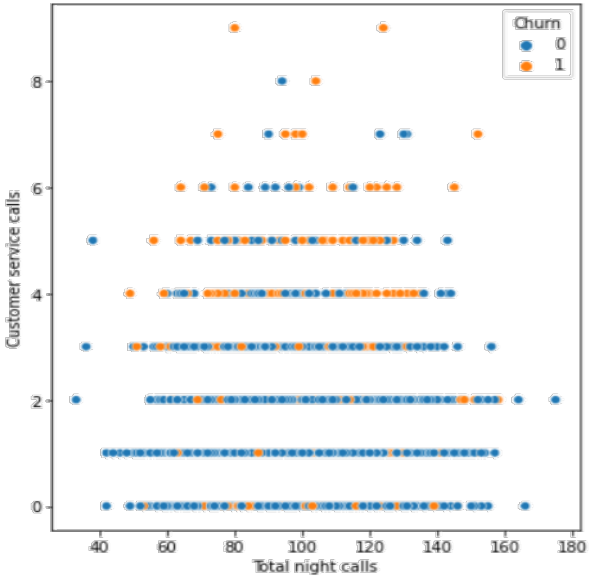


EDA(Exploratory Data Analysis)

We should improve the response time and quality of our customer service calls to ensure customer retention.

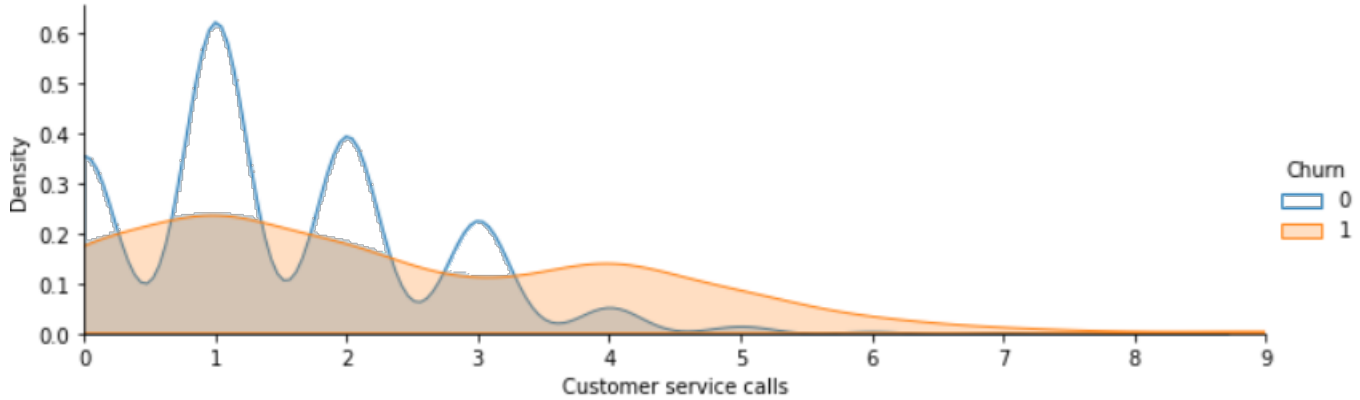






EDA(Exploratory Data Analysis)

- **The less number of times customer calls to customer service the less likely are they to churn. So, try to resolve issues of customer as early as possible.**



Conclusion

In many industries it is more expensive to find a new customer then to entice an existing one to stay. So, our aim is to accurately identify the cohort who is likely to leave early enough so that the relationship can be saved.

In Conclusion, if we want to increase Customer Retention then we have to improve Customer Service Calls feature.

And convince Customers to subscribe to either International plan or Voice Mail Plan as they are helpful in Customer retention.