Syriatel Telecommunications: Predicting Customer Churn

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Business Understanding

Business Problem:

Building a prediction model for Syriatel, to predict which customers are likely to churn.

Churning: when a subscriber cancels, stops or does not renew a subscription service.

Data Understanding

Stakeholder: SyriaTel Communications

The Data: The utilized dataset was sourced from Kaggle.com

Modelling

Highest scoring model: **Decision Tree Classifier**

(macro-average: 83%)

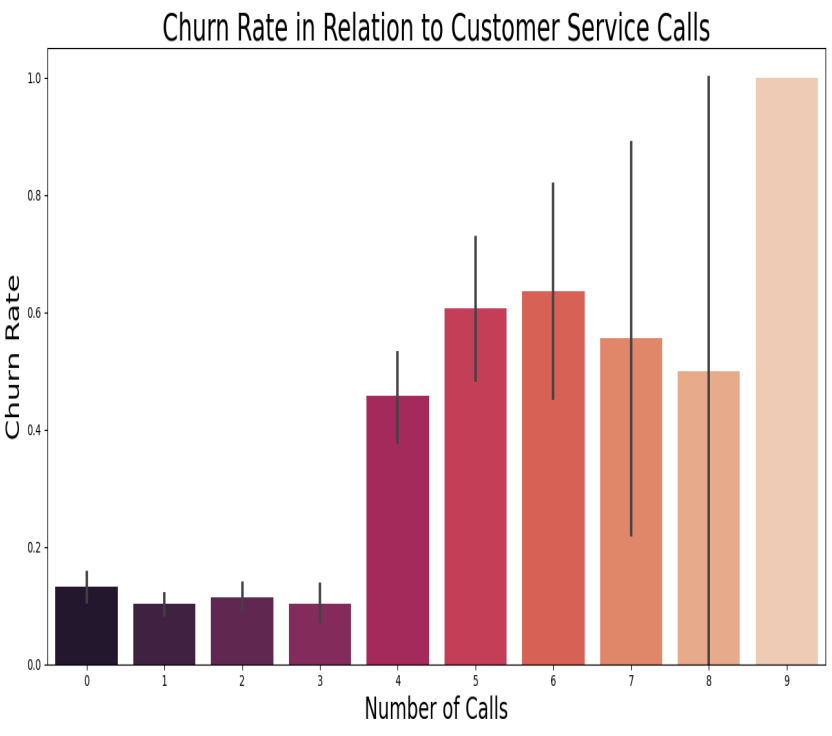
Evaluation Metric:

- Recall is a measure of the correct positive predictions
- Optimization for Recall
- False negatives are costly

$$\text{Recall} = \frac{True\ Positive}{True\ Positive + False\ Negative}$$

$$= \frac{True\ Positive}{Total\ Actual\ Positive}$$

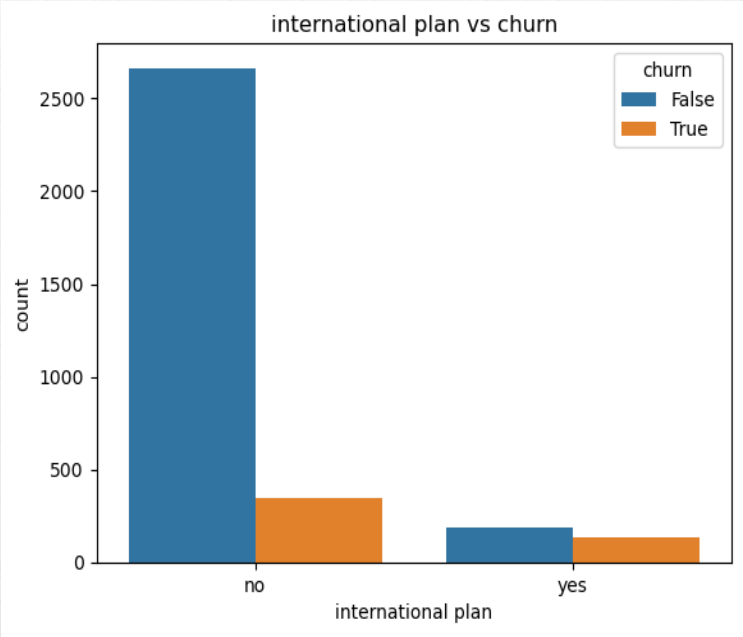
Customer Service Calls



When a customer called customer service at least four times, their likelihood of churning increased significantly.

International Plan

- 346 of the customers without an international plan churned
- 147 of the customers with an international plan churned



Recommendations

- Carry out further investigations on why customers with international plans have a higher percentage of churning and ways to retain them.
- The customer service department should strategize and retrain their staff to better-assist customers with the aim of reducing the number of times a customer has to call, with regard to their service.
- The firm should get more balanced data in order to improve the classification models

Next Steps

The firm should look into more variables that may have an effect on churn, such as: gender, regions and age-group.

THANK YOU

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GitHub: https://github.com/S-Kagwi/Phase-3-Project