Project case study –Telecom churn case study

Business Problem Overview

In the telecom industry, customers are able to choose from multiple service providers and actively switch from one operator to another. In this highly competitive market, the telecommunications industry experiences an average of 15-25% annual churn rate. Given the fact that it costs 5-10 times more to acquire a new customer than to retain an existing one, customer retention has now become even more important than customer acquisition.

For many incumbent operators, retaining high profitable customers is the number one business goal. To reduce customer churn, telecom companies need to predict which customers are at high risk of churn. In this project, we will analyse customer-level data of a leading telecom firm, build predictive models to identify customers at high risk of churn and identify the main indicators of churn.

A Telecom company is losing Customers to its competitors. With the historical customer churn information that they have, they want a ML Model to predict, which of their present customers may churn.

We have decided to create a Logistic Regression model to solve the problem. The Logistic Regression model will be expected to output a Churn Probability for every data under test.

The input data is spread over 3 separate files - churn_data.csv, cust_data.csv and internet_data.csv.

The Data includes the following:

- Personal Data (gender, children, whether senior citizen, dependents...)
- Services Related (Tenure with the provider, payment method, internet packs purchased, special offers...)
- Charges being incurred (Amount of recharge done per month...)

Timelines :

Milestone	Duration	Task start - End Date
Kick off and Business Objective discussion	1 day	
Data set Details	1 Week – 1 ½ week	
EDA	1 Weeks – 1 ½ week	
Model Building	1 Week – 1 ½ week	
Model Evaluation	1 week	
Feedback		
Deployment	1 Week	
Final presentation	1 day	

Acceptance criteria:
To build the best model which gives the maximum performance, and need to deploy the model with either RShiny or Flask/ stream lit Protocols: 1) All participants should add here to agreed timelines and timelines will not be extended 2) All the documentation – Final presentation and R/python code to be submitted before the final presentation day 3) All the participants must attend review meeting