**Project 1**

**Churn Prediction in Telecom Industry using Logistic Regression**

**Project Description :**

According to European Business Review, telecommunication providers lose close to $65 million a month from customer churn. Isn't that

expensive? With many emerging telecom giants, the competition in the telecom sector is increasing and the chances of customers discontinuing a

service are high. This is often referred to as Customer Churn in Telecom.

Telecommunication providers that focus on quality service, lower-cost

subscription plans, availability of content and features whilst creating positive

customer service experiences have high chances of customer retention. The

good news is that all these factors can be measured with different layers of

data about billing history, subscription plans,

cost of content, network/bandwidth utilization, and more to get a 360-degree view of the

customer. This 360-degree view of customer data can be leveraged for predictive analytics to identify patterns and various trends that influence

customer satisfaction and help reduce churn in telecom.

**Steps performed in this project are :**

* **Understanding Problem Statement**
* **Data Cleaning : Removing unwanted columns and outliers which improves the model performance**
* **Data Visualisation : Analysing the data through plots**
* **Data Manipulation : Converting categorical variables into numerical variables**
* **Feature Scaling : Converting all the variable values in particular range**
* **Splitting the dataset into train & test data**
* **Training the model using Logistic Regression**
* **Evaluation of model performance by using confusion matrix**
* **Finding the main reasons for the churn caused in Telecom Industry**

**Programming Language Used : Python**

**Software Used : Google Colab**

**Libraries Used : pandas,numpy,matplotlib,sklearn**