**Proposal for Data Science & Business Intelligence Project**

Project Title: Churn Prediction: Telecom Customer Churn Prediction

Data Retrieved from: Kaggle – [Telco Customer Churn](https://www.kaggle.com/blastchar/telco-customer-churn)

**Potential Data Fields:**

**customerID**: Customer ID

**gender**: Whether the customer is a male or a female

**SeniorCitizen**: Whether the customer is a senior citizen or not (1, 0)

**Partner**: Whether the customer has a partner or not (Yes, No)

**Dependents**: Whether the customer has dependents or not (Yes, No)

**Tenure**: Number of months the customer has stayed with the company

**PhoneService**: Whether the customer has a phone service or not (Yes, No)

**MultipleLines**: Whether the customer has multiple lines or not (Yes, No, No phone service)

**InternetService**: Customer’s internet service provider (DSL, Fiber optic, No)

**OnlineSecurity**: Whether the customer has online security or not (Yes, No, No internet service)

**OnlineBackup**: Whether the customer has online backup or not (Yes, No, No internet service)

**DeviceProtection**: Whether the customer has device protection or not (Yes, No, No internet service)

**TechSupport**: Whether the customer has tech support or not (Yes, No, No internet service)

**StreamingTV**: Whether the customer has streaming TV or not (Yes, No, No internet service)

**StreamingMovies**: Whether the customer has streaming movies or not (Yes, No, No internet service)

**Contract**: The contract term of the customer (Month-to-month, One year, Two year)

**PaperlessBilling**: Whether the customer has paperless billing or not (Yes, No)

**PaymentMethod**: The customer’s payment method (Electronic check, Mailed check, Bank transfer (automatic), Credit card (automatic))

**MonthlyCharges**: The amount charged to the customer monthly

**TotalCharges**: The total amount charged to the customer

**Churn**: Whether the customer churned or not (Yes or No)

**Business Problem Addressed**: Telecommunication companies is an industry that often face serve customer churn (“customer leaving”). A telecommunication company is concern about the number of customers leaving their service for other competitor. Thus, they are trying to understand who and what factors affect customer that are making them churn.

**Use of Scenario Results**: We will analyze how variables impact churn, this will help company to understand what kind of customer is leaving and maybe why customer churn. This will help telecommunication company to develop customer retention program and target potential churning customer to intervene customer churn.

**Data Instance and Useful Features**: The main data instance we will include in our model can be separated into three main categories:

1. Demographic Information (Eg. Gender, age, dependents..etc)
2. Customer Account Information (Eg. Contract, payment method, charges)
3. Service Customer has Signed up for (Eg. Phones, internet, device protection…etc)

**Target Variable**: Our target variable we will be use in our classification problem is Churn – Whether customer left within the last month.

**Added Business Value**: By understanding why customer churn, the telecommunication company would be able to design customer retention program that targets customer that may churn.