## Applied Machine Learning Project Proposal – GROUP 7(BUAN 6341.003)

**Project Title:** Predicting Customer Churn in Telecom Industry using Machine Learning

**Overview of Project:** This project's goal is to forecast customer attrition in the telecommunications business. The percentage of consumers who quit a service provider over a specific is referred to as customer churn. Churn analysis is critical for the telecommunications business in order to decrease customer attrition and retain customers. In this project, we will evaluate customer data using machine learning techniques and create a prediction model to identify customers who are likely to churn.

**Data set:** We will utilize Kaggle's Telco Customer Churn dataset, which includes customer information including demographics, account details, and service consumption history. This dataset has been used successfully in previous studies, and it is appropriate for our research question. The raw data contains 7043 rows (customers) and 21 columns (features).

**Dataset link:** https://www.kaggle.com/datasets/blastchar/telco-customer-churn

**Software and Platforms:** We will be using Python as our primary programming language, along with various libraries such as Scikit-learn, Pandas, Numpy and matplotlib. We will also be using Jupyter Notebook for data exploration, data preprocessing, model development and GitHub for version control.

## Responsibilities of Team Members:

1. Jagjeevan Kaur: Data preparation and building the predictive model.
2. Dhatri Chunchu: Data exploration, data cleaning and Model development.
3. Purushotham Karthik Kolapalli: Model development, testing and deployment.
4. Bhagyashri Raghunath Gadkari: Data preparation and building the predictive model.
5. Ramesh Dasari: Data exploration, data cleaning, model development.

Building Project Presentation and finalizing the Project Report will be done by whole team together.

## Project Schedule:

1. Week (03/27): Data exploration, cleaning, and preprocessing.
2. Week (04/03): Building a predictive model using machine learning algorithms.
3. Week (04/10): Model development, performance tuning, and testing.
4. Week (04/17) and (04/24): Building Project Presentation and finalizing the Project Report.

## Deliverables:

1. Jupyter Notebook with code, and a presentation summarizing the key findings and insights on Thursday, 04/27/2023.
2. Final report outlining the methodology, results, and recommendations on Friday, 04/28/2023.