 What were your contributions in the group submission

I helped to build the model for question 1 to 5 using my own understanding of machine learning and showed it to my team for feedback.

I am grateful for their recommendation on how I should improve on my coding and simplifying the process as well as correcting errors we found along the way. Such as renaming the variables or using another line of code to shorten my code.

 What functions/techniques did you applied to get to the results

Using value\_counts to filter specific values such as removing 0 from ‘MonthyRevenue’

Using .fillna(0) to change Null values we find in the dataset and transform it to 0.

Using .drop() to remove unwanted columns that may be unnecessary for Machine Learning

Using .quantiles(0.99) to remove the top 1% outliers from the dataset.

Making correlation comparism to make analysis between columns. E.g cust\_df[['OverageMinutes','MonthlyRevenue' ]].corr()

Using .select\_dtypes to sort dataframe with numeric and non numerics.

Using StandardScaler and fit\_transform

train\_test\_split using two models logistic regression model and RandomForestClassifier.

Apply threshold for our model with predict\_proba

Making anaylsis using confusion\_matrix and classification\_report

Visualiazation of top 20 important features using sns barplots and labelling them.

 What were the your key takeaways from this module/mini project

The Machine learning models needs to be cleaned properly before we input of X-Independent variables and Y-Dependent variables.

Machine Learning will not work if we do not clean the data first. Such as removing unnecessary columns, Null values and organizing the categorical values.

Learning how to read the Confusion Matrix and Classification Report is also very important. We need to understand about True Positive, True Negative , False Positive and False Negative. By understand these terms we are able to determine if the model is effective for use and whether we should adjust the threshold accordingly.