# CUSTOMER CHURN PROJECT

# Business Overview

**Safana Telecoms** is among the leading company in Syria that provides telecommunication services in the country

# Problem Statement

- The company has faced  significant challenge of customer churning and wants to understand the cause of this change.
- This project will focus on identifying patterns in customers' behavior that will identify predictable patterns in customer behavoiurs

# Objectives

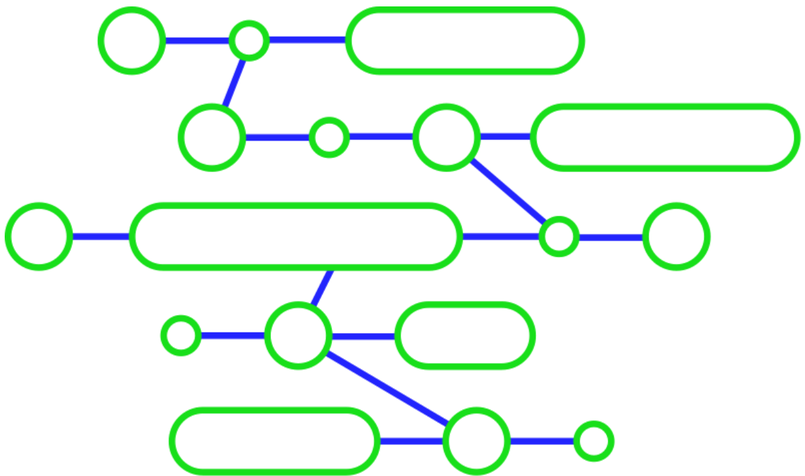
- This project aims to create a classification model that determines customer churning
- To identify features to help retain customer

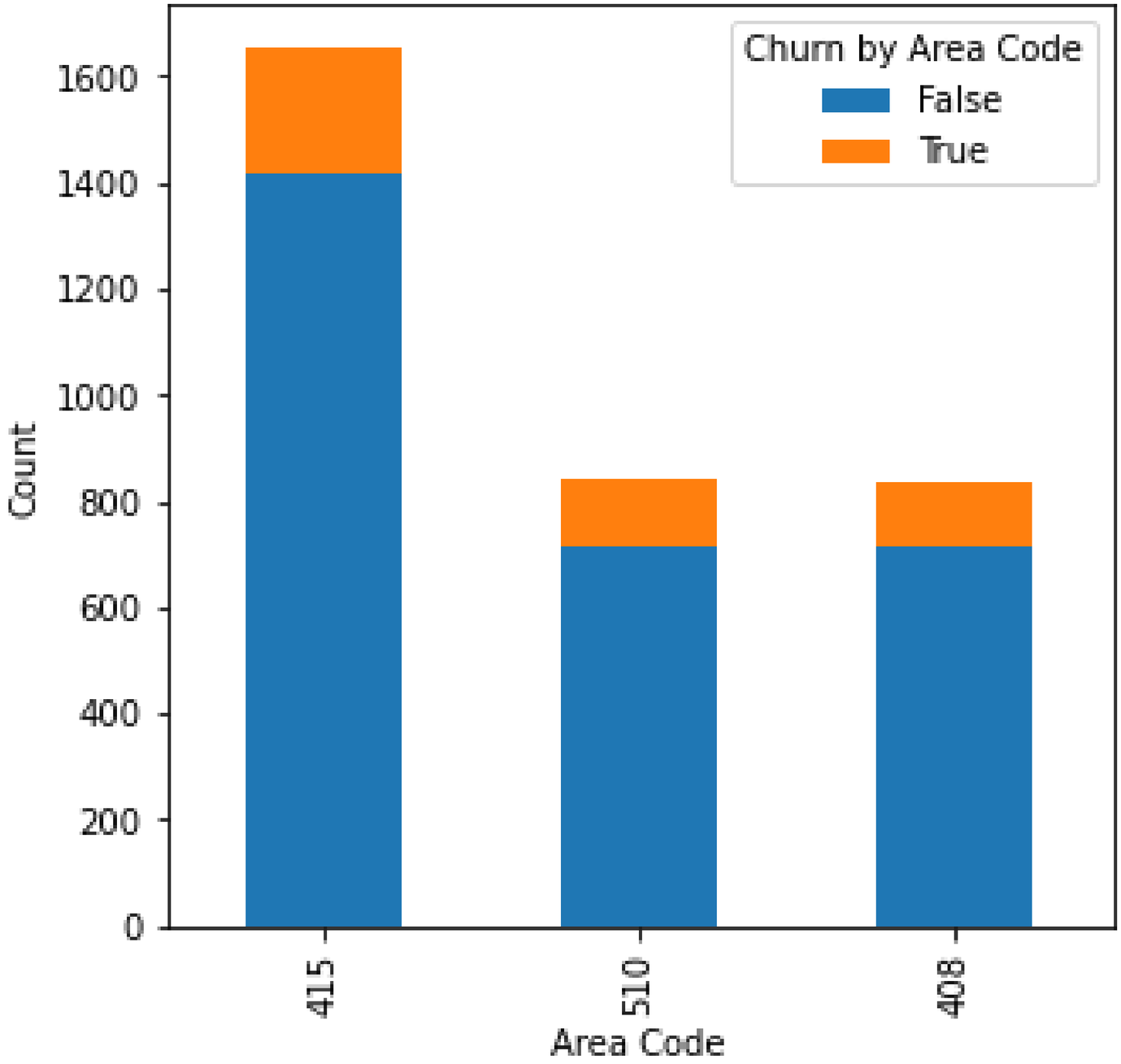
# Data Set

The dataset used in this project is from Syria.
The data contains 21 different features and a **3333** entries

# Exporatoraly Data analysis

- The Data set had 4 categorical features and the 17 were numeric features.
- Churn was used as a dependent variable in the analysis which was a binary class.
- From the data I4.5% of the customers were churning away form the business.






- The Graph shows the Churning rate by Area code with Area 415 having the highest churning rate

# Modeling

The Various modeling algorithms used were:

- Logistic Regression(Baseline model)
- Random Forest
- DecisionTreeClassifier
- K Neighbor

# Final model

- Out of the four models Random forest had the best performance after evaluating the four models.
- The random forest has an accuracy score of 84% showing that the model could predict accurately unseen data at 84%.