**Data Report on** **SyriaTel Telecommunication Company**

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**Business Understanding**

**Business Overview**

SyriaTel is a telecommunication company that specializes in the provision of data and voice services. Like its competitors, the company’s overarching goal is profit maximization. However, one of the major challenges it faces is customer churn, which occurs when subscribers cancel their services and switch to competitors. This project seeks to address that challenge through data-driven methods.

**Problem Statement**

SyriaTel is looking to increase their revenue by reducing the number of customers that are canceling their services. At present, the company does not have a reliable system to predict which customers are most likely to leave. Without such a system, it is difficult to intervene in time to retain customers, which ultimately leads to reduced profits and loss of market share.

**Business Objective**

The main business objective is to reduce customer churn by predicting which customers are at risk of leaving. Achieving this will allow SyriaTel to take timely action and improve customer retention.

**Project Objectives**

**Main Objective**

The main objective of this project is to develop a machine learning classifier that can accurately predict whether a SyriaTel customer is likely to churn.

**Specific Objectives**

These objectives include:

* To analyze customer attributes and usage patterns in order to identify the key drivers of churn.
* To develop, train, and evaluate predictive models that classify customers as churners or non-churners.
* To evaluate the classifier model performance using metrics such as F1-score, precision and recall.
* To generate actionable business insights and recommendations, based on the model outputs, that can support strategies to reduce customer churn.

**Business Success Criteria**

The success of this project will be assessed in three ways:

* It should generate actionable insights that SyriaTel can use to reduce churn rates in the future.
* The predictive model should achieve acceptable levels of performance, with high accuracy and a strong ability to correctly identify customers who are likely to leave.
* The results should be presented in a way that is clear and interpretable, so that they can be easily understood and applied by business managers and decision-makers**.**

Achieving this will clearly inform the shareholders at SyriaTel on which services have a large number of churns and take decisive action in improving the service.

**Requirements and Assumptions**

Requirements: The dataset contains the required information to complete the analysis.

Assumptions: This dataset acquired from Kaggle has the correct and accurate information on the number of churns in Syriatel telecommunication company.

**Data Understanding**

**Overview**

The dataset used in this project is the Churn in Telecoms dataset obtained from Kaggle. It contains customer account and usage information for a telecommunications company.

This dataset is in csv format and it contains 3,333 rows and 21 columns.

**Exploring the data**

The columns in this dataset include:

* **State:** This contains the abbreviation of each statewhere every user resides in.
* **Account length:** This refers to the amount of time a credit account has been open.
* **Area Code:** This is three-digit number that indicates the geographic region of where the number is located.
* **Phone Number:** This is the user’s unique subscriber number.
* **International Plan:**
* **Phone Number:**