

Project Overview This project is about the Syrian Telecommunication company that was assessing the behaviour of the customers to leave their services and move to another telecommunication company(competitor). This will mean customers will soon stop accessing their services such as calling, sms, etc and switch to another service provider. In this project therefore we will explore the available data to classify the customer into two classifiable predictions as: will soon stop using the telcos services and will retain the services of the the telcos. In the longrun we shall determine which features will contribute to the customer discontinuing (soon) services of Syriatel in favour of another telcomunication company.

1.1 Objetcives of the Project

- 1. Determine how long a customer will stay on the Syriatel services
- 2. Determinie the retention ration of customers by Syriatel
- 3. Determine possible strategies to retain customers on Syriatel

2.1 Business Understanding

This project is about assessing why the Syriatel Telecom company is going to loose customers, very soon to anothr service provider within the industry. We shall therefore seek insight on why customers will leave Syriatel or for this matter any company within the industry to cross-over another network. We shall establish the customer trends across various services provided within the network and see what factors will lead the customer abandon the service of one company for the other. In particular we shall seek to answer the following questions:

1. How long does it take the customers to stay with the Syriatel?

^{**} Business and Data Understanding**

- 2. What is the rention ratio of customers by the Telcos?
- 3. What are the likely causes of customers to leave the Syriatel to another telcos?
- 4. What are the likely strategies to be deployed by the teclos to avoid soon losing customers?
- 5. What is the behaviour of the customer before soon leaving the Syriatel to another service customer?

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**** 2.2 Data Understanding****
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In this section we explore the data provided for this project applying Exploration Data Analysisis Techniques to determine how we shall utilise the data provided.

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***2.2.1 Importing Libraries****:
We shall import relevant libraries for the project.
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** 2.2.2 Import the provided data for the project**

We shall load our csv file and see the characteristics of the data provided and identify the features required for this project.

** 2.3 Data Preparation**

In this section we shall undertake data preparation to enable us conduct Exploratory Data Analysis and Modelling by;

(a). Determine any missing values in the data set (b). Identify any duplicated rows and columns (c). Identify any irreleant columns that may not be needed to conduct any analysis and therefore they are of no value to us in conducting this modelling for Machine Learning. This will be achieved by dropping such columns.

2.4 Conducting Exploratory Data analysis

In this section we shall explore the data to see the type of data we are dealing with, establish some relationships and visualise the data. Techinques such as:

- 1. Checking the data types deployed
- 2. Separating datasets into numeric and categorical data
- 3. Describing the stastical measures
- 4. Data visualization
- 5. Data cleaning etc will be appled

3.0 Modelling

We shall deploy two machine learning models to analyse the performance of the model these are; (a) Logistic regression model (b) Decision tree

4.0 Evaluation of Models

In this section we shall present the performance of the models in determining customer moving soon or being retained by Syriatel.

5.0 Conclusion

Under this part we shall provide advisory for both technical and none-technical clients.



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