Telecom Customer Churn and Revenue Prediction using Python

Task and Goal

The goal of this project is to create an application for the use of the marketing / product development and sales teams of a telecommunication company. This application uses *customer churn data* and returns graphs and figures with insights that can lead to developments of products and a marketing plan aimed towards customers that are likely to stay with the company for longer. It can also be used to develop a sales strategy that helps customers choose products appropriate for them, so they do not become unhappy with their service and leave.

What is Customer Churn?

Customer churn is the rate at which customers decide to stop doing business with a company. For a telecommunications company, churn would be the rate at which subscribers drop their services and leave for a competitor. It is an important metric in business, especially in the telecommunications industry, since it is more expensive to sign on new customers rather than retaining current ones given marketing budgets aimed towards non-customers. An analysis and continuous monitoring of customer churn can help companies pinpoint weaknesses and strengths in the customer attrition

strategy. An analysis of who is more likely to leave can also help generate creative solutions for customized services and service packages.

Data Background

To make this project you can use IBM's public sample set called "Telecom Customer Churn". The dataset is meant to simulate a typical dataset of a Telecommunications company..

The dataset contains 7043 observations (rows) and 22 variables (columns) that contain information about customer demographics (gender, senior citizenship status, children, and marital status), services they signed up for (phone line, multiple lines, online security, online backup, device protection, tech support, streaming TV and Movies), account information (type of contract, payment type, paperless billing, monthly and total charges), and churn (which customers left within the past month when the data was collected).

The dataset is present in .csv format, which you can download from the link given below.

https://drive.google.com/file/d/1XkZWQsPRxyVE2qXcQKQOHu7MjYhs3RKW/view?usp=sharing

Use the above dataset to recognize the features to build a ML model that can predict whether a customer is going to churn out or remain in the company.
Also, if the customer remains with the company then build a model to predict the possible revenue that company can generate from them.