

# Telco Customer Churn Prediction

## ***Synopsys:-***

The Telco Customer Churn Dataset contains details about Customers who have left and also about existing customers. It contains Demographic information about the customers, their location and also the services they avail. We have additional details like Population of those location and also the churn reason to find the reason why the customers left.

## ***Objective:***

Our goal is find out whether there exists any particular reason which dominates the churn rate, the pattern of the leaving customers based on their age, location, services avail etc. The objective is to find a Data driven solution which will reduce the Churn Rate and increase customer satisfaction and Revenue for Telco.

## ***Importance of Churn Analysis:-***

Churn Analysis helps companies to retain its existing customer base by studying their pattern habits and offering them with services and incentives. It also helps in identifying redundant services and thereby replacing it with more relevant ones thereby saving in operation costs.

With the aid of Data Driven Models, companies aim in giving value added services and increase customer retentions.

## ***Dataset Information:***

We have the below Datasets available from Kaggle:-

Demographics info:- This contains Demographic information about Telco Customers having details like their Age, Gender, Marital status, dependent status etc.

Location:- This contains the details about customer location like their City, State, zip and latitudinal and longitudinal information.

Population:- This has the Population details of the zip codes.

Services:- This has all the details about Services availed by the customers. For e.g. whether they are having Phone Services, Internet services, Streaming services like Tv, movies, music, unlimited data, Premium Tech

Support, device protection etc. This also has the details about the Monthly and Total Cost in the Quarter, cost about extra data charges and other details.

Churn Status:- This has the information about whether the customer has churned or not. If yes, what was the reason for churning, their churn score etc.

Our objective is to find any correlation between the available data and churn rate. Then come up with proposals which will help retain the customers.

## ***Project Steps:-***

We will be doing the below activities in sequence to arrive at a conclusion:-

1. Data Collection:- Here we will gather the Data from various sources and make it ready for further processing.
2. Data Cleaning, Transforming & Visualizing: - We will do Exploratory Data Analysis on the data and check for any missing values and invalid data. We will drop the redundant columns and try to visualize the data to find any insights.
3. Pre processing and Training Data:- We will run Statistical tests on the data and try to decide which model will be the best fit.
4. Data Modelling:- We will build machine learning models in this step.
5. Conclusion:- We will analyze the results of the models and try to find ways to improve the churn rate if possible.