***BCG Data Science Job Simulation-***

***Task1:*** **Business Understanding & Hypothesis Framing**

As the first phase of the Data Scientist is Business Understanding and Problem solving. Here We need to understand the data and find the key features which releated to the Domain.

Fisrtly, Every Project starts we the below followed Setps:

1. Data Collection
2. Data Preprocessing
3. EDA(Exploratory data analysis)
4. Feature Engineering
5. Model Selection and Training
6. Model Evaluation /Testing
7. Deployment

1. Data Collection: The data collection is the Import phase of every Project, as the above mentioned from last five years the PowerCo facing Customer Churn. So we should Collect the last 5 year data set or information from the PowerCo.
2. Data preprocessing: Data preprocessing/Data cleaning If there is any missing values in the data set it should be cleared and filled with machine learning techniques(Handling data and fill the null values with the mean of that data). Delete/Drop the duplicate data.
3. EDA(Exploratory data analysis): The exploratory data analysis is used to understand the data and find out the key features of the data which is making the outcomes. Visualize the data so that we can understand the data easily.
4. Feature Engineering: As the above mentioned The price may be the key feature for the customer churn, location and Clean Energy, Customer Service- We also find the same relevant features make customer churn.
5. Model Selection and Training: We select the model which best fits the data. We use all the machine learning algorithms and we check which algorithm is performing better as for prediction and based on that Algorithm we train our data to model.
6. Model Evaluation /Testing: Model evaluation which test the model and see the outcomes of that model if it is providing the outcomes better way then we found out the solution for the customer churn. So, for model testing we need to test on different data so that we can get the best outcomes.
7. Deployment: After finding the customer churn Reasons or Issues they we should solve Those issues. Showcase those changes to gain the Customer trust.

As the above mentioned steps are the way to solve the customer churn problem from PowerCo. If we implement the above steps then the problem is solved.