BCG DATA SCIENCE INTERNSHIP TASK 1

HYPOTHESIS MODELLING AND QUESTION FRAMING.

Hello AD,

through the take aways from the meeting i came up with the problem statement and the solution which may be a better suit to solve the problem.  
As PowerCo is concerned about their customers churning,and stating due to the price trends in the market among their competitors may be a reason we can undegor the following process.

Hypothesis:customers churning due to increase in price and seeking other competitors for their price trends.

step 1: testing the hypothesis

collect the historical data of the PowerCo customer contracts and analyse it.extracting the data on the customers who switched to the other providers.

understanding the reason for their churn like wheather the churn and price up took in same period or price ups and down does not affect the churn.

prove the hypothesis if the above condition is true or search for the real problem that lead to the customer churn.

now, draft the problem statement based on the trueness of the hypothesis defined.

step 2:Based on the problem statement build a model by training it with the suitable data to predict the customer churn of PowerCo.

as we no churn predictions are basically binary classification models

we can say that if a customer stays customer is labelled as 0 and if a customer leaves to new provider then is labelled as 1.

Here are the tasks that are to be performed.

task 1:collect relevant data.

1.customer contracts

2.customer informations that incluse their relationship with PowerCo like how often they are buying energy,cost,revenue generated by them etc…

3.energy consumption.

task 2:Understand and clean data(Data preprocessing)

1.clean the data if contains any duplicates or handling missing values

task 3: Perform Exploratory Data Analysis (EDA)

1.understand the insights given by the collected data

2.analyse the distribution and relationships among the features.

task 4: Select and Build a suitable Machine Learning Model that helps in prediction.

1. Train the model with cleaned data.

2.Use cross validation to test the model performance.

task 5: Test wheather the discount can lead to reduction of customer churn

Apply discount on price and check for the churn status of the PowerCo customers.if it has an impact then proceed with the business stratergy if that doesnt affect the churn rate then discounting doesnt help with holding the customer back.

Regards,

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