Subject: PowerCo Churn Prediction and Discount Strategy

Dear AD,

According to our conversation, I'm outlining the data science challenge and key steps required to evaluate the claim that customer price sensitivity drives churn in PowerCo's SME category and that delivering a 20% discount to customers with a higher tendency to leave would be beneficial in lowering churn.

**Problem statement:**

Predict the probability that SME customers will stop using PowerCo's services, and evaluate the effect of a 20% discount on high-churn clients.

**Major steps:**

1. **Data collection**: We will require data on SME customers, such as consumption patterns, billing histories, demographic details, and any other relevant details that the client is able to provide. We will also require data on customers that have churned to be able to gauge the common characteristics
2. **Data cleaning and preprocessing**: We will clean and preprocess the data to handle missing values, outliers, duplicates and any other issues that may affect the accuracy of our predictions.
3. **Feature engineering**: We will create new features from the existing data that may be relevant to predicting churn, such as usage-based billing or average monthly spend.
4. **Churn prediction model**: We will train a predictive model, such as a decision tree, logistic regression model or random forest method, to predict the likelihood of churn for each SME customer.
5. **Discount strategy testing**: We will use the predictions from step the previous step to identify high-churning customers and test the effectiveness of a 20% discount strategy in reducing churn among these customers. We will use A/B testing or control group testing to evaluate the effectiveness of the discount strategy.
6. **Model evaluation**: We will evaluate the performance of our predictive model and the effectiveness of the discount strategy using metrics such as accuracy, precision, recall, and lift.

Kindly do let me know if you have any questions or need any additional information. I will keep you updated on the progress of this project.

Best,

Ayorinde Williams