Dear Associate Director,

I hope this message finds you well.

I took a deep dive into understanding PowerCo’s situation and how we can approach their customer churn problem, specifically related to the hypothesis driven by customer price sensitivity.

To test this hypothesis, I believe it is best to build a predictive model that can identify customers at high risk of churning due to price sensitivity.

Below are the steps needed to test this hypothesis:

**Step 1: Data Collection**

We will need access to the following data from our client:

1. **Customer Data:** This includes customer characteristics, such as industry category, company size, demographic information, etc.
2. **Billing Data:** This includes historical billing information, pricing plans, and any price changes.
3. **Churn Data:** This includes a record of customers who’ve churned as well as any reasons for churning.
4. **Interaction History:** This includes any customer support enquiries, feedback, complaints and ultimately any interaction with customer service.
5. **Market Data:** This includes information on their competitor’s pricing and market conditions, ideally regions where PowerCo operates.

**Step 2: Prepare Data**

We will need to clean and transform the raw data to prepare it for analysis. This will include handing missing values, creating relevant features (such as customer tenure, average bill amount, customer satisfaction scores, etc), and labelling churned and non-churned customers.

**Step 3: Exploratory Data Analysis (EDA)**

We will need to gain insights into customer churn behaviour, which may include things like:

1. Descriptive statistics to understand the distribution of the main characteristics of the dataset (key variables).
2. Data viz to identify patterns, such as the correlation between price changes and churn rates.
3. Hypothesis testing to confirm if price sensitivity significantly impacts churn.

**Step 4: Building Model and Testing**

We will consider various predictive models such as logistic regression, decision tress, random forests, or more sophisticated machine learning algorithms.

**Step 5:**

We will interpret the results and make recommendations based on the model’s findings.

This could include identifying customers at high risk of churning due to price sensitivity, which aligns with the client’s interest in offering a 20% discount to retain at-risk customers.

**Step 6: Ongoing Analysis**

Since the client’s plan to use the predictive model monthly, we will need to ensure its updated with new data and evaluate its performance over time to assess the effectivity of the 20% discount strategy.

To conlude, I believe by taking these steps, we aim to test the hypothesis that is, churn is driven by customer price sensitivety and provide actionable inights and recommendations. I’m open to your guidance and any specific aspects you’d like me to prioritise.

Best regards,

Bobby O.