Subject: Testing the Hypothesis on Customer Churn and Discounting Strategy

Dear Sir/Madam,

I am writing to share my thoughts and findings on the hypothesis that PowerCo's customer churn is driven by price sensitivity and that offering high propensity to churn customers a 20% discount might be effective in reducing churn in the SME segment. To test this hypothesis, we would need to follow the following steps:

Step 1: Define the problem and the data needed

To test the hypothesis, we need data on customer churn, customer demographics, and customer behavior. Ideally, we would also need data on customer interactions with the company, such as customer service calls, complaints, and feedback. We would also need information on the customers who were offered the discount and whether they accepted the offer or not.

Step 2: Prepare and explore the data

We would need to collect and integrate the data from various sources into a data frame that we can analyze. The data frame should have each row representing a unique customer and each column representing a specific variable, such as customer ID, customer demographics, customer behavior, interactions with the company, and the discount offer. We could then explore the data by looking at summary statistics and visualizing the data using various graphs and charts.

Step 3: Develop and test the predictive model

We would need to develop a predictive model that could predict which customers are likely to churn based on their demographics, behavior, and interactions with the company. We could use machine learning techniques, such as logistic regression or decision trees, to develop the model. We would then test the model's accuracy and performance using a holdout dataset or cross-validation.

Step 4: Analyze the impact of the discount offer

After developing the predictive model, we would need to analyze the impact of the discount offer on customer churn. We could do this by comparing the churn rate of customers who were offered the discount with those who were not offered the discount. We could also look at how many customers accepted the offer and whether the offer was effective in reducing churn.

Step 5: Draw conclusions and make recommendations

Finally, we would draw conclusions from our analysis and make recommendations to PowerCo on whether the discounting strategy is effective in reducing churn. We would also provide insights into the key factors that drive customer churn and provide recommendations on how to retain customers.

In terms of exploring the contribution of various factors to customer churn, we could use various data fields, such as customer demographics (age, gender, income), behavior (usage patterns, payment history), and interactions with the company (customer service calls, complaints, feedback). We could perform exploratory analyses, such as correlation analysis, regression analysis, and clustering, to identify the key factors that drive customer churn and provide insights into how to retain customers.

Please let me know if you have any questions or if you need any further information.

Best regards,

Daksana