

Subject: Exploring Churn due to Price Sensitivity - Proposed Data Science Approach

Respected, Associate Director

I hope this email finds you well. In order to test the hypothesis that churn among our client's SME customers is driven by price sensitivities, we would need the following data from the client:

1. Customer Data:

- Demographic information (e.g., age, location, industry, company size).
- Historical billing data, including usage patterns, payment history, and contract durations.
- Pricing details, such as price changes and any discounts offered.
- Churn labels indicating customers who have churned (e.g., non-renewal of contracts, account closures).

2. Analytical Models:

In order to assess the hypothesis effectively, we propose the following analytical models:

- Binary Classification Models: We will explore various algorithms suitable for binary classification, such as logistic regression, decision trees, random forests, and gradient boosting. These models will help predict whether a customer is likely to churn or not based on their price sensitivity and other relevant features.
- Feature Engineering: We will engineer additional features, including percentage change in price for each customer, contract length in relation to price changes, and customer tenure with the company. These features will provide valuable insights into price sensitivities and their impact on churn.
- Model Evaluation and Interpretation: Once trained, the models will be evaluated using appropriate performance metrics such as accuracy, precision, recall, and F1-score. Additionally, we will interpret the model's feature importances or coefficients to identify the key factors contributing to price sensitivity and churn.

We believe that with the availability of the aforementioned data and by utilizing the proposed analytical models, we can effectively test the hypothesis related to churn driven by price sensitivities among our client's SME customers. The outcomes of this analysis will provide actionable insights for reducing churn and improving customer retention.

If you have any further questions or would like to discuss any specific aspects in more detail, please let me know. I am eager to work on this project and contribute to its success.

Best regards,

Basant Pareek