

Dear Sir/Madam,

In my initial analysis for PowerCo, I realized that there are mainly two hypotheses we need to test. Firstly, whether customer churn is driven by price sensitivity. The second hypothesis is whether offering customers a high propensity to churn a 20% might be effective or not.

To test these two hypotheses, we need you to kindly provide the following data:

1. historical data of the customers-- which should include characteristics of each client, for example, industry, historical electricity consumption, date joined as a customer, etc.
2. Historical price data – which should indicate the prices the client charges to each customer at granular time intervals
3. Churn data - which should indicate if the customer has churned

Once we have the data, the work plan would be:

1. We would need to define what price sensitivity is and calculate it
2. We would need to engineer features based on the data that we obtain, and build a binary classification model (e.g. Logistic Regression, Random Forest, Gradient Boosted Machines to name a few),
3. The best model would be picked based on the tradeoff between the complexity, the explainability, and the accuracy of the models.
4. We would subsequently dive deeper into why and how price changes impact churn, and size the business impact of the client's proposed discounting strategy.

Thank you very much.

Best regards,

Guoyi Ma