

Executive summary

Situation

- PowerCo is experiencing customer churn, and assuming that churn is driven by the customer's price sensitivities. One possible strategy is to offer customers at high propensity to churn a 20% discount.

Machine Learning Modeling

- A LightGBM classification model has been built to predict customers' churn probability, achieving an accuracy of 0.89 and AUC score of 0.66 on test set.

Insights

- Around 10% churn rate exists in current customers.
- Major features driving customer churn, including:
 - A high net margin on power subscription
 - Original campaigns that customer first subscribed to, especially with 'lx' and not with 'ka'
 - A high consumption combining with a drastic changing price, or a low consumption combining with a fixed price
 - Sales channels, especially not associating with 'lm'

Action plan

- The proposed 20% discount strategy is confirmed to be effective. Through revenue estimate, the optimal cut-off of offering discount is 0.31.
- Moreover, a more profitable strategy is to offer 29% off at the cut-off of 0.54.