Executive summary

Context:

• Powerco is grappling with customer attrition, which they attribute to customers being sensitive to pricing. To address this issue, they are considering a strategy of offering a 20% discount to customers at a higher risk of leaving.

Machine Learning Approach:

• Following data cleaning, exploratory data analysis (EDA), and feature engineering, I employed a Random Forest Classifier. The model successfully predicts the probability of customer churn, achieving an accuracy rate of 90% and a precision score of 91% on the test dataset.

Key Findings:

• Approximately 9.7% of customers have churned, while the remaining 90% have not.

• The net margin on power subscription and consumption over a 12-month period emerges as a significant factor influencing churn.

• The forecasted bill for meter rental in the next two months also plays a pivotal role in customer attrition.

• Temporal factors, such as the duration of customer activity, tenure, and the time since the last contract update, are notably influential in predicting churn.