

Dear xx,

To solve the problem of finding customers' reason to churn, first we need dataset as listed below:

- Customer Demographic Dataset –contains customers' demographic information, the service plan they choose, the date they start with PowerCo, etc.
- Churn Data –contains customers and their corresponding service plan, service starting and ending date, total consumption of electricity
- Electricity Price Data – contains historical prices of electricity

After acquiring these datasets, we'll first examine churn rate's relationship with customer demographic. Then we'll focus on the impact of price sensitivity on churn rate. We will try machine learning models such as logistic regression, random forest and SVM to predict customer churn. The performance of the models are compared to achieve a balance between precision and interpretability. A synthesis model which blend demographic factors and price factors will also be established to explore customers' reason to churn, thus find solution to prevent it in a larger scale.

Regards,

Lexie (Ruotong) Zhu