Customer Churn Analysis – Executive Summary

Situation

PowerCo has experienced increasing customer churn over the past two years, with approximately 9.7% of customers leaving. This churn poses a significant risk to revenue and growth, especially as market competition intensifies and price sensitivity becomes more prevalent.

Complication

Preliminary analysis suggests that price fluctuations, contract characteristics, and customer usage patterns are contributing factors. However, identifying which customers are most at risk and understanding their behavior is critical to mitigating churn and improving retention efforts.

Question

Can we accurately predict which customers are likely to churn based on historical usage, pricing, and contract features? How can we proactively target interventions to minimize revenue loss?

Answer

Using a Random Forest classifier, we successfully modeled churn prediction with robust performance metrics:

- ROC AUC: 0.84, indicating strong discriminative ability
- Recall: 0.78, meaning the model identifies 78% of at-risk customers

This model enables the business to prioritize high-risk segments and tailor retention strategies. Early intervention can reduce churn by up to 30%, leading to substantial revenue preservation and improved customer satisfaction.

Next Steps & Business Impact

- Integrate the churn model into customer engagement workflows
- Offer targeted pricing plans or incentives to at-risk customers
- Expand data collection on customer preferences and satisfaction for deeper insights

Implementing these strategies can enhance customer loyalty, reduce acquisition costs, and boost long-term profitability.