



PowerCO Customer Churn Prediction

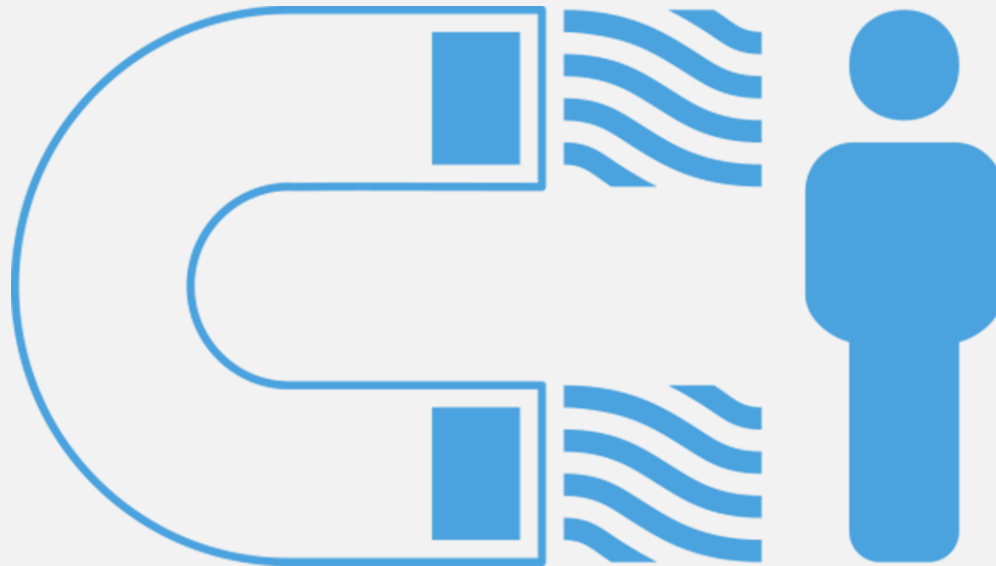
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Current Model Insights and Strategic Recommendations

True Label \ Pred Label	Not Churn	Churn
	1807 3	199 6

1.1 Current Situation

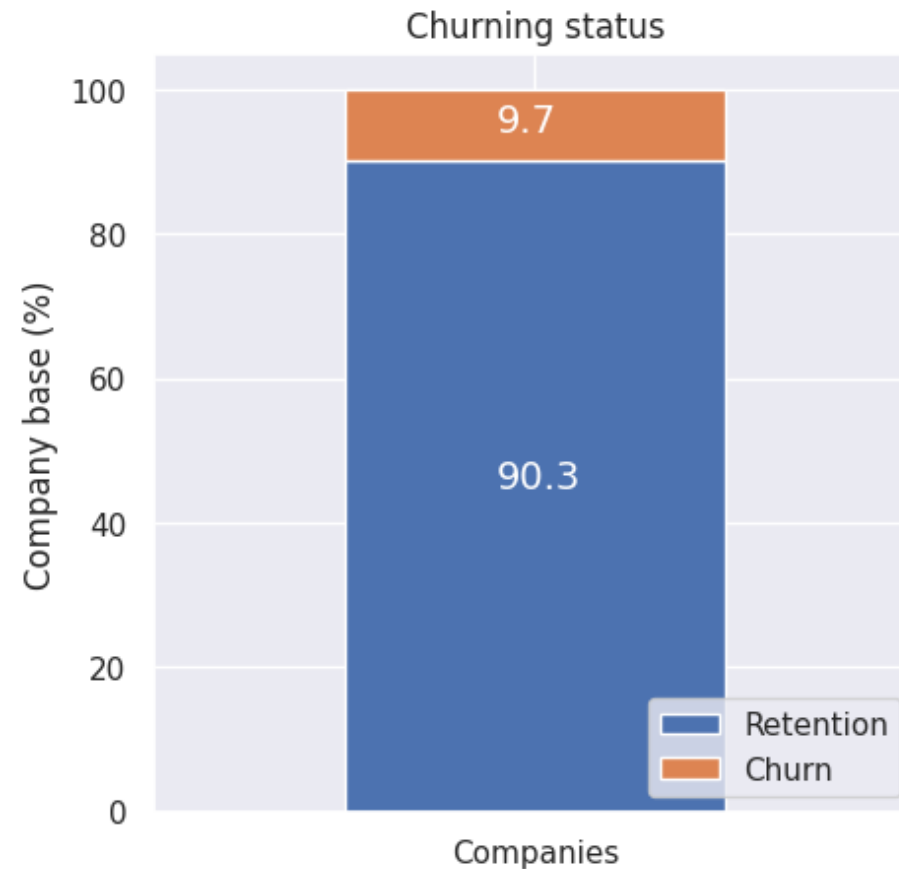
- The client is facing challenges with customer churn, impacting revenue and operational stability.
- Understanding and predicting churn is crucial for targeted interventions and resource allocation.



1.2 Complication

Challenges and Opportunities

1. High churn rates among a segment of customers could lead to increased costs and reduced profitability.
2. Identifying factors leading to churn can uncover opportunities for retention and cost-saving strategies.



1.3 Key Question

1. How can we predict which customers are likely to churn and what factors contribute to this churn?
2. Can we leverage this information to improve customer retention strategies?



1.4 Model Insights and Recommendations

Model Performance:

- **Accuracy:** 90%
- **Precision for Non-Churn:** 90%
- **Recall for Churn:** 3% (Model has a high accuracy but low recall for churn)

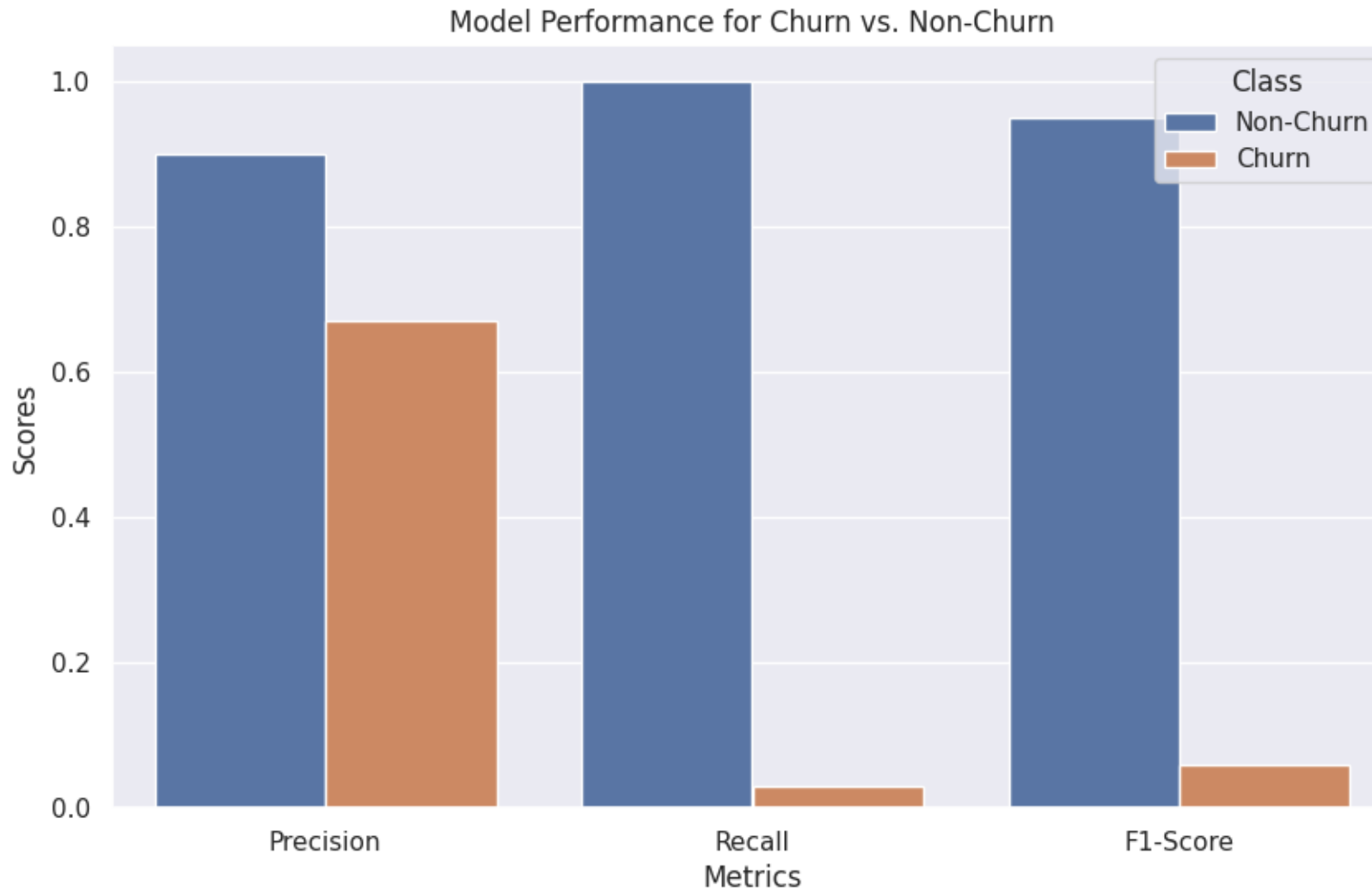
Key Findings

- The model is effective in identifying non-churn customers but struggles to identify churners.
- Insights from feature importance suggest that factors like `forecast_price_energy_off_peak` and `forecast_discount_energy` play significant roles.

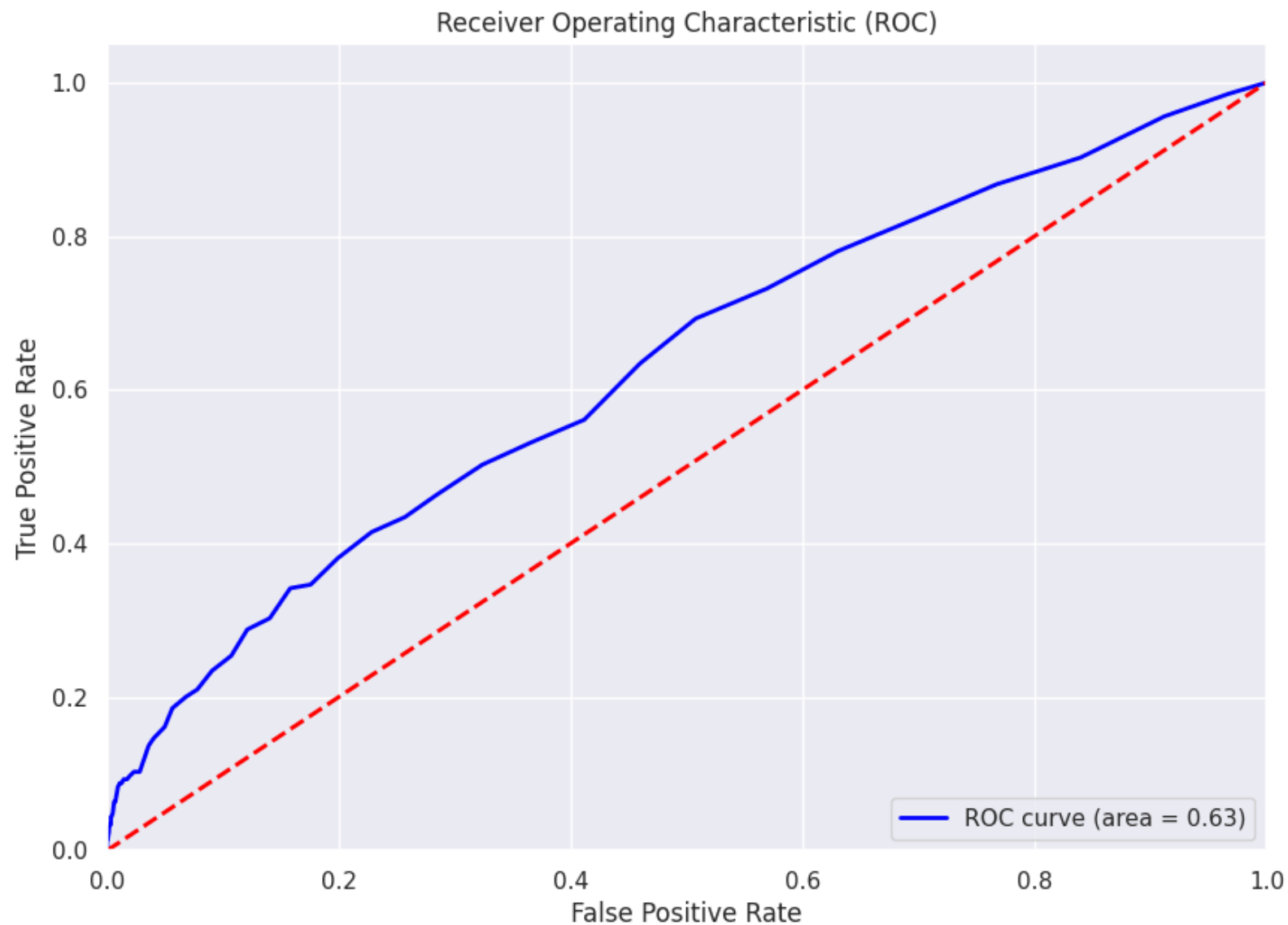
Recommendations:

- Focus on enhancing the model to better identify churners.
- Implement targeted strategies based on key features influencing churn.

1.5 Model Performance



1.6 Model ROC Curve



2.1 Impact on Business

- **Improved Retention:** By accurately predicting churn, you can implement proactive retention strategies.
- **Cost Savings:** Focused efforts on at-risk customers can lead to significant cost savings and increased revenue.
- **Strategic Decisions:** Enhanced data-driven insights allow for better allocation of marketing and customer service resources.

2.2 Key action

- **Target High-Risk Customers:** Identify and focus on customers who are predicted to churn, especially those showing significant changes in energy consumption patterns or those impacted by price fluctuations.
- **Impact:** Proactively engaging with these customers can reduce churn rates and improve loyalty.

2.3 Personalize Retention Strategies

Action: Utilize the insights from key features such as `forecast_price_energy_off_peak` and `forecast_discount_energy` to tailor offers and communication strategies. For example, offer discounts or incentives to customers sensitive to energy pricing.

Impact: Personalization increases the effectiveness of retention campaigns, leading to higher customer satisfaction and retention.

2.4 Improve Customer Support

Action: Enhance customer service efforts, particularly for those identified as at-risk. Ensure timely and effective responses to customer inquiries and concerns.

Impact: Better customer support can address issues before they lead to churn, improving overall customer satisfaction.

2.5 Monitor and Adjust Pricing Strategies

Action: Regularly review and adjust pricing strategies, especially during off-peak times, to ensure competitiveness and customer satisfaction.

Impact: Competitive and transparent pricing can reduce customer dissatisfaction and the likelihood of churn.

2.6 Monitor and Adjust Pricing Strategies

Action: Establish feedback mechanisms to gather input from customers, especially those who have churned or are at risk. Use this feedback to continuously improve products and services.

Impact: Continuous improvement based on customer feedback helps in addressing the root causes of churn and enhances overall customer experience.

3. Key Takeaways

High Accuracy in Predicting Non-Churn: The model is highly accurate in predicting customers who are likely to stay, providing confidence in the stability of a large portion of the customer base.

Room for Improvement in Churn Prediction: The model's lower performance in predicting actual churners highlights the need for more targeted and personalized retention strategies.

Strategic Actions Needed: By focusing on high-risk customers, personalizing offers, improving customer service, and refining pricing strategies, the client can significantly reduce churn, leading to enhanced customer loyalty and long-term profitability.

3. Conclusion

This proactive approach will not only minimize churn but also strengthen customer relationships, ultimately contributing to sustainable business growth.