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Problem Description

ABC Bank wants to promote its new term deposit product. To make its marketing efforts more efficient and cost-effective, it needs a machine learning model that can predict whether a customer will subscribe to the term deposit based on their personal, interaction, and socio-economic data. This model will help the bank focus its resources on customers with a higher likelihood of subscribing.

Final Recommendation

Based on our data analysis and model evaluation, we recommend that ABC Bank use the machine learning model with the highest F1 score and balanced precision-recall tradeoff. Additionally, we suggest the bank focus its marketing efforts on customer segments with high predicted probabilities (e.g., those with past positive campaign responses, mid-aged working professionals, and higher balances).

Avoid using features like call duration for real-time predictions since they're only known after the call. Instead, build campaigns around actionable pre-call features like job type, balance, and previous contact outcomes.

GitHub Repository Link:

https://github.com/ManilShangle/DataGlacierProject