Week 7: Business Understanding

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Problem Description

ABC Bank wants to sell its term deposit product to customers. Before launching the product, the bank aims to develop a model to understand whether a particular customer will buy their product or not, based on the customer's past interaction with the bank or other financial institutions.

Business Understanding

ABC Bank aims to leverage a Machine Learning (ML) model to accurately identify customers who are most likely to subscribe to its term deposit product. By focusing marketing efforts on high-probability customers, such as through targeted telemarketing, SMS, or email campaigns, the bank can achieve substantial cost savings. This is made possible by reducing resource allocation to less likely prospects, thus optimizing time, effort, and budget.

The primary goal of developing this ML model is to enhance the bank's customer targeting strategy, ensuring that the marketing team directs its resources to the most promising leads. As a result, the bank will improve conversion rates while minimizing wasted marketing expenditures.

The model will be built in two distinct scenarios: one that incorporates the 'duration' feature and another that excludes it. While the 'duration' feature may improve predictive accuracy, it is not ideal for deployment due to its complexity and the potential lack of interpretability for business stakeholders. Furthermore, the 'duration' is typically only available after a customer interaction, making it an impractical basis for pre-call campaign strategies.

Therefore, model performance will be assessed and compared across both scenarios to strike the right balance between technical robustness and business feasibility. The focus will be on delivering a model that is not only effective but also practical, transparent, and aligned with the bank's operational needs and marketing objectives.

Project Lifecycle and Deadlines

Week	Deadline	Assignment
Week 7	2025.03.19	Business Understanding
Week 8	2025.03.26	Data Understanding
Week 9	2025.04.02	Data Cleansing and Transformation
Week 10	2025.04.09	EDA
Week 11	2025.04.16	EDA Presentation and proposed modeling technique
Week 12	2025.04.23	Model Selection and Model Building/Dashboard
Week 13	2025.04.30	Final Project Report and Code

Data Intake Report

The data intake repost has been uploaded to Github. Here is the link:

https://github.com/asat94/Data-Glacier-Internship/blob/main/Week%207%20Business%20Understanding/Data%20Intake%20Report.pdf