Week 7: Deliverables:

Project: Bank Marketing (Campaign)

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 Batch Code: LISUM25

Specialization: Data Science

Individual project

1. Problem Description

1.1 Overview

The ABC Bank is embarking on a strategic initiative to market its term deposit product to existing and potential customers. To facilitate this effort, the bank seeks to develop a predictive model that can effectively identify customers more likely to subscribe to the term deposit, based on their past interactions with the bank and other financial institutions. The project aims to leverage the wealth of customer data collected during marketing campaigns to improve campaign efficiency and resource allocation.

1.2 Objectives

The primary objectives of this project are as follows:

- To build a predictive model to determine the likelihood of a customer subscribing to the term deposit.
- To identify key features and customer segments that significantly influence subscription decisions.
- To enable the bank's marketing team to focus their efforts on customers with a higher likelihood of subscribing, thereby optimizing resource allocation and campaign effectiveness.
- To assess the impact of including or excluding the "duration" feature in the predictive model.

2. Business Understanding

2.1 Importance of the Project

The significance of this project lies in its potential to transform ABC Bank's marketing strategies. Predicting the outcomes of marketing campaigns on a per-customer basis and understanding which features influence these outcomes are pivotal for improving the efficiency of the bank's marketing efforts. By doing so, the bank can reduce resource wastage, improve customer targeting, and ultimately enhance its overall marketing performance.

2.2 Targeted Benefits

The anticipated benefits of this project include:
- Increased subscription rates for the term deposit product.
- A more precise and efficient allocation of marketing resources leads to cost savings.

- Enhanced customer segmentation to identify individuals and demographics more likely to subscribe.
- A deeper understanding of how past interactions and features impact customer decisions, facilitating tailored marketing campaigns.

2.3 Scope

The scope of this project includes:

- Analysis of the provided marketing dataset from the Portuguese banking institution.
- Building and evaluating machine learning models to predict term deposit subscriptions.
- Assessing the influence of the "duration" feature on model performance, as well as comparing models with and without this feature.
- Converting model metrics into actionable business insights.
- Preparing a presentation for non-technical stakeholders to communicate project findings and recommendations.

This section sets the stage for your project report by providing a clear understanding of the problem's context, objectives, and the potential business benefits to be derived from the project. You can expand upon these points and add more detail as needed.

3. Project Lifecycle

Week	Task	Date
Week 7	Problem statement, business understanding, dataset collection	19 Oct 2023
Week 8	Data understanding and identifying approaches to overcome problems like missing data, outliers etc.	26 Oct 2023
Week 9	Data cleaning and transformation	2 Nov 2023
Week 10	EDA and model recommendation	9 Nov 2023
Week 11	Presentation on EDA and proposed model technique	16 Nov 2023
Week 12	Model Selection, model building and hyperparameter tuning	23 Nov 2023
Week 13	Final project report and code submission	30 Nov 2023