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| Project Proposal |
| Predicting Term Deposit Subscriptions in Bank Marketing Campaigns |

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# Field of Interest:

**Finance / Marketing Analytics**

We are particularly interested in the financial sector, focusing on marketing analytics. Our project will leverage machine learning to optimize customer targeting in bank marketing campaigns, enhancing the likelihood of customers subscribing to financial products such as term deposits.

# Type of Data:

The project will utilize bank marketing data, which includes customer profiles and interaction records from direct marketing campaigns. This data will help us explore customer behaviors and factors that lead to successful subscriptions.

* Customer Demographics: Age, job, marital status, education, etc.
* Economic Indicators: Employment variation rate, consumer price index, etc.
* Campaign Details: Duration of the last contact, previous contact history, etc.
* Outcome Variable: Whether the client subscribed to a term deposit or not (binary classification).

# Research Questions:

We aim to answer the following key questions through our analysis:

1. Which factors (e.g., customer demographics, campaign details) most influence a client’s decision to subscribe to a term deposit?
2. Can we accurately predict whether a customer will subscribe to a term deposit using machine learning models?
3. How effective are past campaign interactions (e.g., duration, number of contacts) in determining future subscriptions?
4. Which customer segments show the highest likelihood of subscription?

# Possible Data Source:

We will be using the Bank Marketing Dataset from the UCI Machine Learning Repository. This dataset contains records of 41,188 customer interactions during a marketing campaign for term deposits at a Portuguese bank.

Source: Bank Marketing Dataset - UCI Machine Learning Repository

# Project Goal:

The goal of this project is to develop a machine learning model that accurately predicts whether a customer will subscribe to a term deposit based on their profile and marketing campaign interactions. The insights derived from this model will help banks optimize their marketing strategies by focusing on customers with a higher probability of subscription, leading to better resource allocation and higher conversion rates.