# Bank Marketing Campaign Analysis

## 📌 Project Overview

This project aims to analyze a direct marketing campaign dataset from a Portuguese bank, where the goal is to predict whether a client will subscribe to a term deposit product. The dataset includes various attributes related to customer demographics, past interactions, and economic context, making it suitable for exploratory data analysis (EDA), predictive modeling, and actionable business insights.

## 🎯 Objectives

**The key objectives of this project are:**- Understand the characteristics of clients who subscribe to term deposits  
- Identify the most influential features affecting subscription  
- Perform data cleaning and preprocessing  
- Conduct exploratory data analysis (EDA)  
- Build and evaluate a predictive classification model  
- Develop customer segmentation for campaign targeting  
- Build dashboards in Power BI to share insights visually

## 📂 Dataset Information

The dataset used is 'bank-additional-full.csv' from the UCI Machine Learning Repository. It contains 41,188 records and 21 columns. The target variable is 'y', which indicates whether a client subscribed to a term deposit ('yes' or 'no').

## 🛠️ Tools & Technologies

- Python (pandas, seaborn, scikit-learn, matplotlib)  
- Power BI for data visualization and dashboarding  
- Jupyter Notebook for development  
- Microsoft Word for documentation

## 📈 Business Impact

This analysis can help the bank improve its campaign targeting, reduce marketing costs, and increase the conversion rate for term deposits. By identifying key characteristics of responsive clients, the bank can personalize outreach strategies and enhance customer retention.