

Bank Marketing- Intelligent Targeting

Overview

Marketing Introduction: The process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return.

Marketing campaigns are characterized by focusing on the customer needs and their overall satisfaction. Nevertheless, there are different variables that determine whether a marketing campaign will be successful or not. There are certain variables that we need to take into consideration when making a marketing campaign.

The Marketing team of ADBI bank wants to target customer using ML to sell their term deposits.

A **Term deposit** is a deposit that a bank or a financial institution offers with a fixed rate (often better than just opening deposit account) in which your money will be returned back at a specific maturity time.

Data Dictionary

The dataset contains several customer parameters which are considered important during the marketing campaign.

Train File

CSV containing the customers for whom 'deposit' opted is known.

Bank client data:

- 1 - **age:** (numeric)
- 2 - **job:** type of job (categorical: 'admin.', 'blue-collar', 'entrepreneur', 'housemaid', 'management', 'retired', 'self-employed', 'services', 'student', 'technician', 'unemployed', 'unknown')
- 3 - **marital:** marital status (categorical: 'divorced', 'married', 'single', 'unknown'; note: 'divorced' means divorced or widowed)
- 4 - **education:** (categorical: primary, secondary, tertiary and unknown)
- 5 - **default:** has credit in default? (categorical: 'no', 'yes', 'unknown')
- 6 - **housing:** has housing loan? (categorical: 'no', 'yes', 'unknown')
- 7 - **loan:** has personal loan? (categorical: 'no', 'yes', 'unknown')
- 8 - **balance:** Balance of the individual.
- 9 - **contact:** contact communication type (categorical: 'cellular', 'telephone')
- 10 - **month:** last contact month of year (categorical: 'jan', 'feb', 'mar', ..., 'nov', 'dec')
- 11 - **day:** last contact day of the week (categorical: 'mon', 'tue', 'wed', 'thu', 'fri')

12 - **duration**: last contact duration, in seconds (numeric). Important note: this attribute highly affects the output target (e.g., if duration=0 then y='no'). Yet, the duration is not known before a call is performed. Also, after the end of the call y is obviously known. Thus, this input should only be included for benchmark purposes and should be discarded if the intention is to have a realistic predictive model.

13 - **campaign**: number of contacts performed during this campaign and for this client (numeric, includes last contact)

14 - **pdays**: number of days that passed by after the client was last contacted from a previous campaign (numeric; 999 means client was not previously contacted)

15 - **previous**: number of contacts performed before this campaign and for this client (numeric)

16 - **poutcome**: outcome of the previous marketing campaign (categorical: 'failure','nonexistent','success')

17 – **customer_id** : represents unique ID of each customer.

Output variable (desired target):

18 - **Deposit** - has the client subscribed a term deposit? (binary: 'yes','no')

Test File

CSV containing everything except deposits is to be predicted.

Submission File Format

Variable	Description
customer_id	customer ID
deposit	Predicted value (yes or no)

Public and Private LeaderBoard

Test file is further divided into Public (25%) and Private (75%).

- Your initial responses will be checked and scored on the Public data.
- The final rankings would be based on your private score which will be published once the competition is over.

Evaluation Criteria

Your model performance will be evaluated on the basis of the **Accuracy Score**.

Rubric

Component	Weightage
Data Cleaning and Data Visualization	25%
Model Building and Evaluation	60%
Pipeline and Deployment (Dashboard/Webapp)	15%