**Bank Term Deposit Predictions**

Predicting Subscription to Term Deposits through Marketing Campaigns



Data Card

Code (0)

Discussion (0)

**About Dataset**

**About this dataset**

This dataset, titled Direct Marketing Campaigns for Bank Term Deposits, is a collection of data related to the direct marketing campaigns conducted by a Portuguese banking institution. These campaigns primarily involved phone calls with customers, and the objective was to determine whether or not a customer would subscribe to a term deposit offered by the bank.

The dataset contains various features that provide insights into customer attributes and campaign outcomes. These features include:

* Age: The age of the customer.
* Job: The occupation of the customer.
* Marital Status: The marital status of the customer.
* Education: The education level of the customer.
* Default: Whether or not the customer has credit in default.
* Balance: The balance of the customer's account.
* Housing Loan: Whether or not the customer has a housing loan.
* Contact Communication Type: The method used to contact the customer (e.g., telephone, cellular).
* Day: The day of the month when the last contact with the customers was made.
* Duration: The duration (in seconds) of the last contact with customers during a campaign.
* Campaign Contacts Count: Number of contacts performed during this campaign for each customer  
  -pdays : number days passed since previously contacted form previous camapign  
  -poutcome : outcome from previous marketing campaign

The purpose behind this dataset is to train a predictive model that can determine if a given customer will subscribe to a term deposit based on these various features. By analyzing historical data on successful and unsuccessful subscription outcomes, patterns can be identified which help predict future subscription behavior.

In addition to training data, there is also test data included in this dataset. This test data can be used to evaluate how well our trained predictive model performs when applied to new, unseen instances.

By utilizing this dataset and applying machine learning techniques, businesses in similar domains can better understand their target audience and optimize their marketing efforts towards potential subscribers who are more likely to respond positively to these campaigns

**How to use the dataset**

Here are some key steps you can follow to effectively utilize this dataset:

* **Understanding the columns**: Start by understanding the different columns in the dataset. Each column represents a specific attribute or feature related to the customer and their interaction with the bank's marketing campaign. The columns include:
  + Age: The age of the customer.
  + Job: The occupation of the customer.
  + Marital: The marital status of the customer.
  + Education: The education level of the customer.
  + Default: Whether the customer has credit in default or not.
  + Balance: The balance of the customer's account.
  + Housing: Whether the customer has a housing loan or not.
  + Contact: The contact communication type with the customer.
  + Day: The day of the month when

**Research Ideas**

* Predictive Modeling: This dataset can be used to build a predictive model to predict whether a customer will subscribe to a term deposit or not. By analyzing the various features such as age, job, marital status, education, balance, and previous marketing campaign outcomes, the model can provide insights into the likelihood of subscription.
* Customer Segmentation: The dataset can be used for customer segmentation analysis. By clustering customers based on their characteristics and behavior, banks can identify different segments of customers with varying propensities to subscribe to term deposits. This information can then be used to tailor marketing campaigns and strategies specific to each segment.
* Campaign Optimization: The dataset can also be used for optimizing marketing campaigns. By analyzing the effectiveness of different communication types (contact), number of contacts performed (campaign), duration of contact, and outcome of previous campaigns (poutcome), banks can gain insights into which strategies are most successful in driving subscriptions. This information can help in optimizing future campaign efforts for better results

**Acknowledgements**

If you use this dataset in your research, please credit the original authors.  
[Data Source](https://huggingface.co/datasets/Andyrasika/banking-marketing)

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No Copyright - You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission. [See Other Information](https://creativecommons.org/publicdomain/zero/1.0/).

**Columns**

**File: train.csv**

| **Column name** | **Description** |
| --- | --- |
| **age** | The age of the customer. (Numerical) |
| **job** | The occupation/employment status of the customer. (Categorical) |
| **marital** | The marital status of the customer. (Categorical) |
| **education** | The education level attained by the customer. (Categorical) |
| **default** | Whether the customer has credit in default or not. (Categorical) |
| **balance** | The balance in the customer's account. (Numerical) |
| **housing** | Whether the customer has a housing loan or not. (Categorical) |
| **contact** | Type of communication used to contact customers (phone, cellular, etc.). (Categorical) |
| **day** | Day of the month when customers were last contacted. (Numerical) |
| **duration** | Duration (in seconds) of the last contact with customers during the previous campaign. (Numerical) |
| **pdays** | The number of days passed by after contact from the previous campaign. (Numerical) |
| **poutcome** | Outcome from the previous marketing campaign. (Categorical) |

**File: test.csv**

| **Column name** | **Description** |
| --- | --- |
| **age** | The age of the customer. (Numerical) |
| **job** | The occupation/employment status of the customer. (Categorical) |
| **marital** | The marital status of the customer. (Categorical) |
| **education** | The education level attained by the customer. (Categorical) |
| **default** | Whether the customer has credit in default or not. (Categorical) |
| **balance** | The balance in the customer's account. (Numerical) |
| **housing** | Whether the customer has a housing loan or not. (Categorical) |
| **contact** | Type of communication used to contact customers (phone, cellular, etc.). (Categorical) |
| **day** | Day of the month when customers were last contacted. (Numerical) |
| **duration** | Duration (in seconds) of the last contact with customers during the previous campaign. (Numerical) |
| **pdays** | The number of days passed by after contact from the previous campaign. (Numerical) |
| **poutcome** | Outcome from the previous marketing campaign. (Categorical) |