Bank Marketing

Abstract:

Companies build many marketing campaigns to increase subscribed persons. Many companies work on analyzing the market before starting campaigns, and the prediction of subscriptions size and classify of the audience are considered as the basic points in their work. Machine Learning algorithms have shown remarkable performance on several classify and prediction tasks. In this project, will clean and process the data set then will study one of supervised machine learning algorithm: Logistic Regression to build the models to predict and anticipate the client's cases in terms of whether he will subscribe to a deposit or not based on his /her information, and finally, will test the model accuracy.

Data set:

The data is related to direct marketing campaigns of a Portuguese banking institution. The marketing campaigns were based on phone calls. Often, more than one contact to the same client was required, in order to assess if the product (bank term deposit) would be ('yes') or not ('no') subscribed. The data set available on the UCI site. The data set includes 18 columns, 17 columns containing independent features and one dependent variable which will be predicted by a machine learning model. And 45211 rows. some features about age, job, marital, education, default, balance, housing, loan, contact, duration, campaign and "y" which is the output variable to know if the client subscribed a term deposit? (binary: 'yes','no').

Tools:

To build machine learning models we need useful tools which help to accelerate the learning process. GPU is one of the best choices for training machine learning models. Google enables GPU service by clouding in the Colab site which includes JUPYTER NOTEBOOK editor to write the code. Python language available many useful libraries the can help such as numpy , pandas and SKlearn.