

Marketing Campaign

Machine Learning - MSc DMDS - EM Lyon

Year 2020-2021

1 Introduction

Machine learning (ML) has been increasingly used for guiding marketing activities and this activity can be called Predictive Marketing.

"I see... I see... a mysterious stranger coming to your site and buying three pairs of socks." I'm sorry to inform you, but no, *predictive marketing* is more than just employing a clairvoyant within the company to predict your customers' future behavior.

No, this set of marketing techniques is much more complex than it first appears. It focuses, of course, on prediction, but uses a very specific source of information: data. Data that, by analyzing it correctly, can be used to predict and model your purchasing behavior, allowing the company to anticipate your future actions on its site.

It is with the rise of Big Data that *predictive marketing* has really started to evolve. Over the years, it has been optimized thanks to the increasingly intensive use of artificial intelligence, and more specifically Machine Learning algorithms, which allow to anticipate with millimeter precision the probable actions of the user or prospect.

This project is made to make you enter the world of *predictive marketing*. In this project, your team will have to make a marketing campaign to sell a product of your choice. Here are a few examples:

- New Apple M1 Computer
- A meal delivery
- A pen
- A term deposit

As you will have to obtain the dataset by yourself, this project will require a lot of creativity.

2 Objectives / Tasks

The objective of the project is to determine the profile of the clients that would be the most likely to buy your product. Validate the product you have selected with your professor as fast as possible, so you can start your project. Therefore, the first task of this project is to determine which object you are going to use and what criterion would make a client buy or not buy your object. Ideally, you would have at least 10 criterion. Think about the input dataset and output dataset that your model will have to give. You might want to have a look at this study:

<https://archive.ics.uci.edu/ml/datasets/bank+marketing>

The second task of this project is to make a collection of the data. Therefore, you will have to either make a google form or try to do it with phone calls (a mix of both could be good) and try to get answers from fake customers. Ideally, you should get at least 100 entries in your database.

The third task will be to train a machine learning model, which would analyze the dataset and predict, according to their profile, if new customers would buy your product. You will have to prove the validity of your model.

The fourth task is to prepare a presentation of your results. This implies making visuals to explain your results. You will have 15 to 20 minutes to show the result of your work.

3 Grading

The grade of your project will be determined by the teacher after your presentation. There will be no individual grade for members of the same team, unless there are clear disparity in the effort that was put. The four different task will each represent 25% of the final grade.