

MALIS Project Fall 2020

Members of the project:

- Matteo NOTTARIS
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Project's title: *Determination of stocks market indicator's relevance depending on a situation*

Project's description:

We are both interested in finance and especially the world of stocks markets, and we think that this is an area where machine learning has not yet been very developed. As a result, we wanted to combine machine learning and markets for our MALIS project. We first thought about the possibility of creating ML algorithms which would be able to “predict” the future evolution of stocks, but then we agreed that it would be a bit ambitious to try to predict future.

Matteo did an internship in a private bank this summer and worked with traders in a trading room. We contacted one of them to look for advice. He told us that creating an algorithm able to decide whether or not an indicator, over markets, is relevant on a given situation would be interesting. The algorithm could go even further and give the most appropriate indicator among the lot according to a situation. This project interested us a lot because it was not only theoretical and there could be a serious application behind it for traders in trading room, if it were successful

We decided to restrain the project a bit and to problematize it in this way : study two or three useful indicators and write algorithms capable to determine depending on a given situation which of these three indicators is the most relevant. In order to modify the evaluating situation, we could change different parameters : equity studied, slope of the stock exchange,....

We have not yet decided which machine learning algorithms or techniques we could/should use. We are only beginners in machine learning, and we will probably need the help of expert in the domain.

For the data set we have two different options. The first one which would probably be the best one is that the trader in Crédit Agricole Indosuez, with which we are in contact, will send us Bloomberg data that he would have previously extracted. Nevertheless, he has to come back to us on that point and be sure with his hierarchy that he has the right to do that. In case the trader will not be able to send us data, he indicated us a website (alphavantage.com) where we can find different dataset and especially over more than 50 different indicators and FOREX index.

What we have to decide?

- ➔ Determine algorithms and ML technics
- ➔ Determine which indicators to study
- ➔ Determine over which index study : oil, gold, silver, equities...?
- ➔ Determine where to find dataset (Bloomberg through CAI, internet)