MALIS first Project

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Topic:* *Sales Forecasting for a pub – Telecom Bar'itech (Bar of the school)

Description:

Motivation: What problem are you tackling? Is this an application or a theoretical result?

The problem we are tackling is the need of knowing what will be sold so that the managers can order in the right quantities each product. The Bar of Telecom Paris does not have much money and can't afford some loss of expired products. The aimed result is an indicator that will help the managers to predict their sell and thus to provide the right amounts of products.

Method: What machine learning techniques are you planning to apply or improve upon?

We think that a logistic regression model could predict the sale of each product, however we do not have enough knowledge to be sure of that for the moment. We will probably do supervised Machine Learning.

The Data Base :

The database is gathering 10 years of sales, with each transaction containing the hour, the product and the client, plus information on each client (age, consumption, history of transaction).

We plan on also using the schedule of the school for each year (building a database with those) to maybe find some correlation between the schedules and the sales. (holidays …)

Intended experiments: What experiments are you planning to run? How do you plan to evaluate your machine learning algorithm?

In order to do supervised machine learning we will firstly consider the 8 first years of our data and then test our model on the two next years to see if it is accurate. That is how we will evaluate it. And if we want to continue to evaluate it, we will access the data base to gather the information of the actual months (September October … 2020) and see if our predictions are near the real results.

If the database of the bar or just the way the bar works cannot be studied to do a machine learning model, then we will use the database of a supermarket. (Walmart database available online)