The Machine Learning Canvas

Designed for: Designed by: Date: Iteration: .

Decisions

How are predictions used to make decisions that provide the proposed value to the end-user?

The data gathered is used to build a model that represent important trends and possible outcomes. The model is based on current available data to predict future trends and basic on this new data the end-user can make optimised decisions and prepare a good planning like how much investing on different departements to increase revenue or predict the behaviour of customer(buy or not)

ML task

Input, output to predict, type of problem.

Input: historical data of the activity for the past years(R&D,marketing ,administration spend)(sexes, age,salaire)

Output: most possible outcomes of the new data for the next period of time(revenue)(état achat)

Type of problems: accuracy of predictions depend on the model used and quality of data

Value Propositions

What are we trying to do for the end-user(s) of the predictive system? What objectives are we serving?

We're trying to give the end-user a vision of the possible outcomes of the activity during the next period or the behaviour of possible customers so that he can take the best decisions to improve the productivity or increase the number of clients and/or avoid possible problems that may occur during the execution of the daily tasks. For example in enterprises file depending on R&D spend, marketing and administration we can predict the possible revenue

Data Sources

Which raw data sources can we use (internal and external)?

The raw data sources we can use are usually those with direct or indirect relation with the targeted variable were trying to predict.

It can be stored usually in txt or csv files or from existing warehouses

Collecting Data

How do we get new data to learn from (inputs and outputs)?

We can directly fetch data from the existing updated sources

Or just interact with the data team to get them

Making Predictions

When do we make predictions on new inputs? How long do we have to featurize a new input and make a prediction?

For the start-ups example the predictions are made at the beginning of the project to allocate the available resources to achieve the best revenue.

For the second example we can use them daily to predict the behaviour of visiting customers

Offline Evaluation

Methods and metrics to evaluate the system before deployment.

We can run simulations using live data recently generated to measure the accuracy of the model before actually using it to take new decisions.

The end-user will be able to optimise his spending to have the best result.

Features

Input representations extracted from raw data sources.

50 start-ups:

The spending of the different departments of the start-ups(R&D,administration,marketing)

Centre commercial;

Basic customers information as age sex and salary

Building Models

When do we create/update models with new training data? How long do we have to featurize training inputs and create a model?

We do that every time new data are generated to increase the accuracy of the model or just to prediction the evolution of a new parameter

Live Evaluation and Monitoring

Methods and metrics to evaluate the system after deployment, and to quantify value creation.

For first example keep monitoring results while project in progression to check for possible issues

For second example We have to run A/B test on a selected segment of customers for a set period of time to evaluate its performance