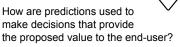
#### Decisions



historical data is used to build a mathematical model that captures important trends. That predictive model is then used on current data to predict what will happen next, or to suggest actions to take for optimal outcomes.

#### MI task

Input, output to predict. type of problem.

The ML task is to build mathematical model that will help predict 'the future' and therefore make more profit

# Value **Propositions**

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

We are trying to facilitate the predictions to the end user(s) and help him(them) classify new data easily

### **Data Sources**

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

all kinds of sources:

image

texte

sound

question answering data

biological data ...

## **Collecting Data**

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

we can collect data from different kinds of sources:

Social media

Vidéos

financial websites

Clients

Surveys

## Making **Predictions**

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

Once the model(s) is(are) complete and already tested, then we can proceed to making predictions.

# Offline **Evaluation**



Methods and metrics to evaluate the system before deployment.

In order to evaluate the system before deployment, we use the confusion matrix.

## **Features**

Input representations extracted from raw data sources.

Many types of features can be done from the data:

Graphs(Line,

**Plots** 

# **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 update the model when the scoring given by the initial one is far from expectations.

# Live Evaluation and Monitoring

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

Crossvalidation, Root mean square error, Kmeans, Area under the curve...