# Machine learning recap

Algoritmes kan je splitsen in 3. Supervise, unsupervised en reinforcement

Supervised learning heeft labels nodig, anders geen supervides learning.

Reinforcement learning, gaat op rewards of penalties gebasseerd op … Tries to minimize the goal and the result the machine gives by trying

5 verschillende type dingen die je wilt weten, 5 verschillende algoritmes. Je hebt een aantal vragen die je kunt stellen om het juiste algorimte te krijgen. Is this A or B? – Classification Algoithms

Instance based or model based? Instance based is dat je al een getrainde dataset hebt, je krijgt dan een nieuwe instance die moet besluiten welk label eraan wordt gehangen

Unsupervised learning needs a training set, with that you van devide it by some clusters.

Reinforcement learning is based on observations. Its learning with trail and error.

It observes, than selecets an action, perform action, get reward or penalty, update policy (learning step), iterate until optimal policy.

**Classification by eye**

Classify things on eye. What features are important? (on color).

Label is the value for a feature. Does it have wings? Is a feature. Answer ‘Yes, no’ is a label. One feature should have different labels.

Key is to make a dataframe with features and samples. Each row is a feature, each column is a label.

Data should be shuffled as much as possible. You should also split it into train and test data. You do this to not overfit. otherwise you train the entire dataset and it will not recognize new data.