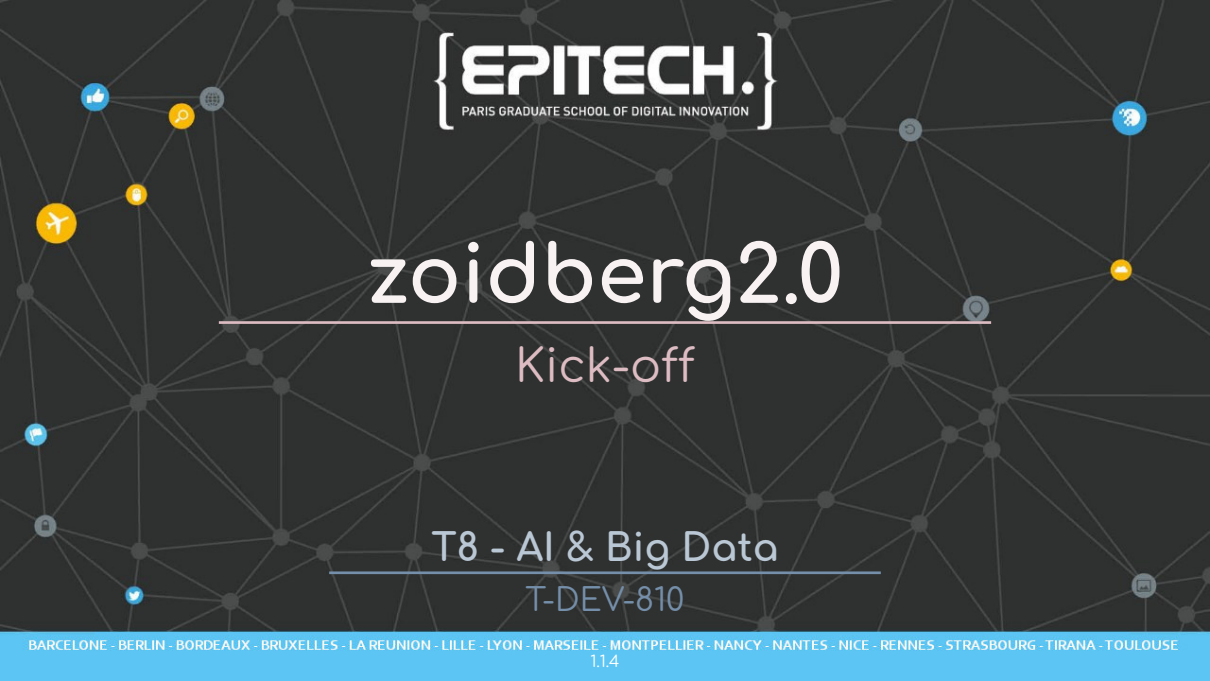


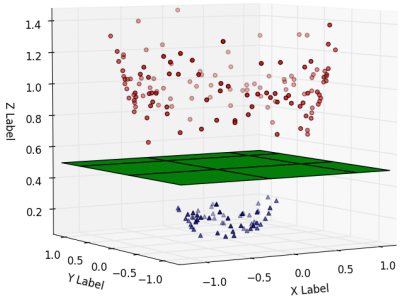
zoidberg2.0

Kick-off

T8 - AI & Big Data

T-DEV-810

Machine learning

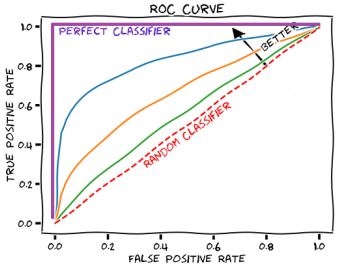


Learn from data instead of stating explicit rules.

Find regularities in samples to classify, display, make suggestions or decisions, …

Many applications: finance, health, language processing, robotics, games…

Supervised classification



Cluster information between classes.

Assume regularity Y=F(X), where Y is the class and X contains the various parameters.

Try to build an **estimator of F** based on sample data.

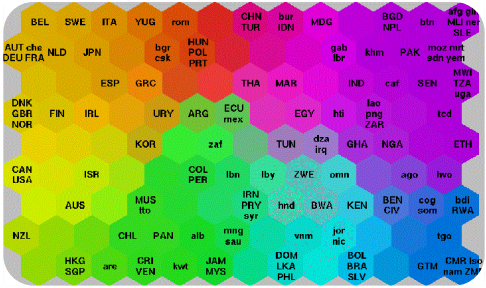
Image recognition

Data = bunch of pixels.
Associate pixels with a label.

Start with tagged pictures. **Emulate rules**.
Then, **apply rules on unlabeled pictures**.

You may rebuild missing data or retrieve compressed file.

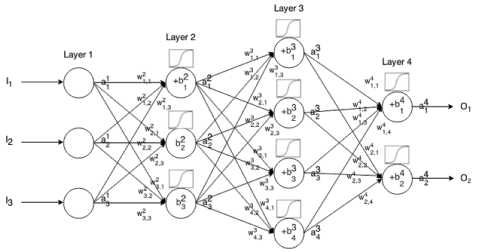
Visualization



Frequent usage of **ML** for decision-making.

Starting with multi-dimensional (n>2) data, produce a 2-dimensional visualization, without losing too much information.

Dealing with big data



Quality & **size** of data impact algorithm's choice.

Neural Networks are not always the best option.

Learn to **select variables**, **control running time** and **assess quality** of solutions.

Back to the project

Given a sizeable amount of pictures from a medical bank:

- build **robust** algorithm, using **scarce resources** ;
- return **reliable predictions** to detect infected organs.

Any questions

?