

# Machine learning (ML)

## What is it?

Machine learning (ML) is a family of statistical methods at the heart of artificial intelligence. ML requires powerful computing capacities, which became widely available in the 2000s. It performs greatly at predicting or classifying on a variety of datasets (image, sound...): "Is this sign a stop sign or a red light?" "Is this face of a man? What age?". A major condition for ML to be accurate: having enough images, text ... to "train" the algorithm before using it.

## Influencers to follow

Andrew Ng, Yann LeCun, François Chollet, Zeynep Tufekci, Azeem Azhar, Cathy O'Neil.

## What business impact?

- **Diagnosis / decision-making / recommendations:** where a human is slow and commits errors, ML can analyze complex data quickly to arrive at a very reliable judgment (fraudulent file or not? Correct price or not? Should this part be replaced or not?).
- **Autonomy:** ML allows vehicles and robots to make quick series of diagnostics, which can produce a complex behavior (steering a vehicle, grasping an object, talking ...).

## Companies to assist you

Machine learning is at the heart of AI, so they are the same companies: DataGenius, mfglabs, Datalyo, Sicara, Quantmetry, nabra.com + any major consulting firm.

## Organizations leveraging machine learning

Machine learning is widely adopted by all industries, service providers and business functions:

- Bank & insurance: fraud detection, product recommendations, scoring calculation
- Industry: warehouse and logistics chain management, production management

- HR: sourcing of candidates
- Marketing: market analysis, targeted advertising campaigns
- Finance, audit and accounting: automation and control of information flows.