AI is a way of artificially making a computer intelligent. (Do various tasks similar to humans)

According to John McCarthy: ‘AI is the science and engineering of making intelligent machines/programs’.

The intuition and motivation behind AI comes from the human brain. (Neocortical memory stores patterns (temporal and spatial) not images.

With the same intuition of the human brain, people wanted the computer to learn from the data that you feed into it, then the computer should be smart enough to make intelligent decisions based on them.

Need?

* Automate tasks that humans feel are redundant
* Predict future outcomes that it understood based on the patterns and structures it extracted from data/experiences.

ML is a way to implement AI (a sub-category). (Decision tree, random forest, Naïve bayes, SVM, KNN, Kmeans…)

Training samples along with the training labels (Supervised learning)

# My research:

Nowadays, we often hear about Machine Learning, a concept closely related to Artificial Intelligence and Deep Learning, in different sectors of activity without knowing how and where it was born, or what this "new" technology is based on, or what its repercussions would be for the whole of humanity.

Machine Learning belongs to the field of Artificial Intelligence. Its goal is to allow a machine to learn from a set of data to perform a task without having to program it explicitly.

It is of course impossible to talk about the origin of Machine Learning without mentioning the origin of AI. Artificial Intelligence is considered to have had its beginnings with the creation of the Turing test, in 1950. It was the British mathematician Alain Turing who came up with this test, in which a human interlocutor blindly questions another human being and a machine, with the aim of deciding between man and machine. To keep the test simple, the conversation is limited to text messages between the protagonists.

In this context, the first intelligent programs were created. In 1959, the American mathematician Arthur Samuel used the term Machine Learning for the first time for his program created in 1952, a program capable of playing checkers and learning as it went along, until it finally beat the fourth best player in the United States.

Artificial Intelligence has known from this period until 1990, large phases known as "the winter of AI", which represent a stop of advancement or even a mistrust of this technology, because of excessive promises and lack of expected results. This being said, it finally experienced an imperial rebound in the 1990s, not because of the discovery of revolutionary algorithms, but because of the increase in the computing power of computers on the one hand, the appearance of the Internet on the other hand, which allowed the exchange of information between scientists in a faster and simpler way, but also the appearance of new sources of data in large quantities that accompanied the Internet, thus representing the most important cause of the rise of AI.

Indeed, nowadays we all use Machine Learning hundreds of times a day without realizing it, for example, every time you do a search on Google, and you come across rather relevant results, it's because behind it there is a Machine Learning algorithm that has learned to find the most relevant results among billions of possible results, or again, when you put a photo on Facebook, there is a Machine Learning algorithm that has learned to detect faces on photos and has thus been able to identify you but also when you go on Youtube/Amazon/Netflix, there is a Machine Learning algorithm that has learned to know you personally, and that can recommend you the content you are likely to buy or watch, or when you are speeding and the radar identifies your license plate, so that the police can send you the fine to your home, it is thanks to a Machine Learning algorithm that has learned to identify the letters and numbers on the license plates All the use cases mentioned above are impossible to achieve with classical programming because billions of possible cases must be coded.

Finally, Machine Learning is revolutionizing the whole world, as it is being implemented in different fields and industries, such as

- The transportation industry with autonomous cars.

- Health with the diagnosis of thousands of cancers.

- Finance with the prediction of the stock market price.

- Security with fraud detection.

- Pharmacy with the optimization of clinical trials.

As well as many other sectors, such as telecommunications, media, public sector, energy, agriculture, not to mention connected objects (Alexa, OK-Google)...

As detailed in the study "The age of analytics: competing in a data-driven-world" by the American consulting firm McKinsey, dated 2016, the various declinations of Machine Learning will transform 12 sectors of the economy through 120 concrete application cases.

ML has essentially 4 main components:

* The dataset: usually the dataset is divided into two main components, the features (training samples/independent variables) represents the basis from which we are going to train our machine, the target (training labels/ dependent variable) represents the variable we want to predict.
* The model and its parameters: depending on the type
* The loss function
* The optimisation function

# CV: exp:

## E-Ambition:

Design and development of a BI solution for TicTacSanté:

-Analyze the functional and technical requirements

-Locate the necessary production data

-Develop a project knowledge base

-Define the conceptual and logical architecture of the solution

-Develop all integration processes

-Model and enrich the datamarts and cubes

-Creation of interactive reports to facilitate decision making

## Industrial project:

Supervised learning of a prediction algorithm for COVID-19 positive cases from clinical data.

-Definition of the objectives

-Exploratory data analysis (Python)

-Comparative analysis of algorithms and choice of model

(Decision trees, KNN, Reglogistic, SVM, RandomForest)

## Mcdonald’s:

Segmentation of McDonald's gambetta customers using clustering techniques, Python, elbow method, Kmeans.

## CNCE:

Realization of a comparative study of foreign trade on the the African level, highlighting the KPIs collected through dashboards (PowerBI). Organization and animation of periodic meetings, presentation of the results.

## La poste:

Design and implementation of a monitoring system for quality of service and quality of service and performance indicators using SSIS, SSMS, SSRS.