Introduction in AI

Domeinen

ARTIFICIAL INTELLIGENCE
Early artificial intelligence stirs excitement.

MACHINE LEARNING
Machine learning begins to flourish.

DEEP LEARNING
Deep learning breakthroughs drive AI boom.

1950's 1960's 1970's 1980's 1990's 2000's 2010's
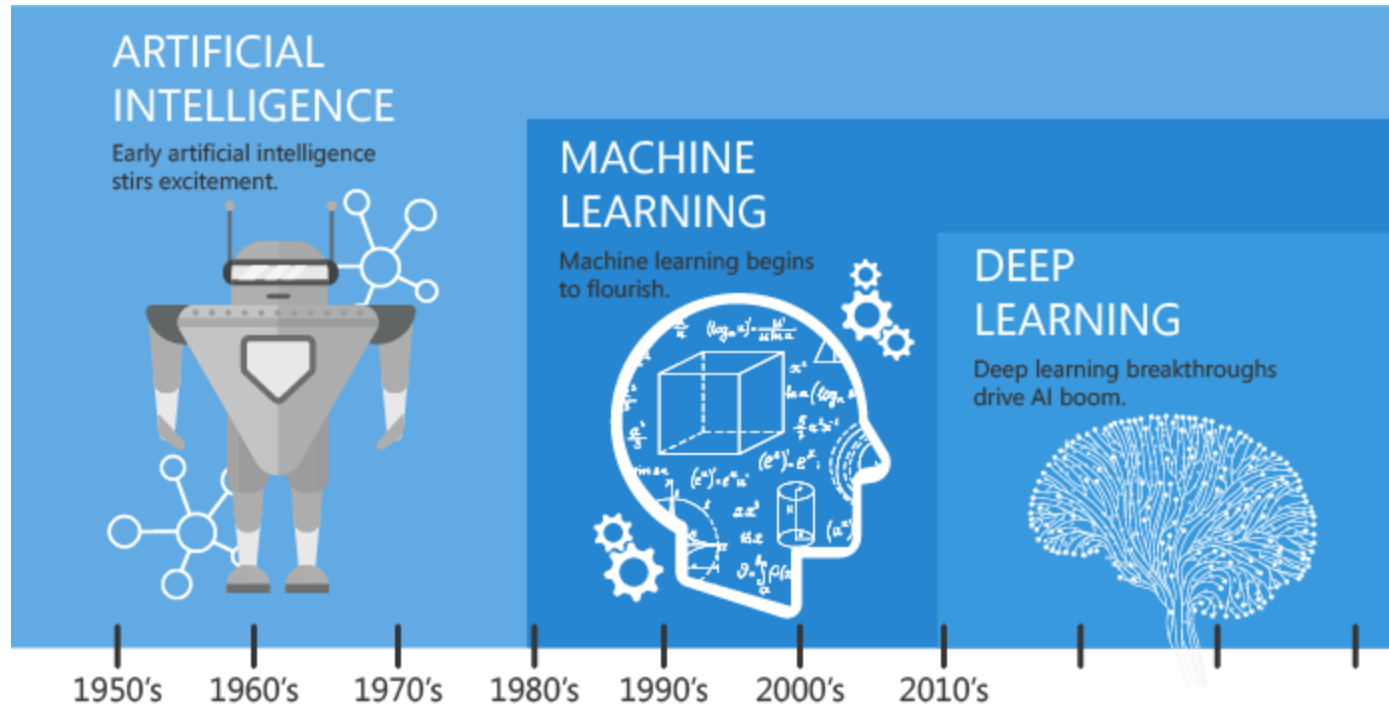
Since an early flush of optimism in the 1950's, smaller subsets of artificial intelligence - first machine learning, then deep learning, a subset of machine learning - have created ever larger disruptions.

Kunstmatige/Artificiële Intelligentie

- Kunstmatige intelligentie (AI) is een breed gebied van informatica dat zich bezighoudt met de ontwikkeling van **intelligente machines** die taken kunnen uitvoeren waarvoor doorgaans menselijke intelligentie nodig is.

- Het doel van AI is om intelligente machines te creëren die kunnen **redeneren, leren, waarnemen en handelen** op een manier die **vergelijkbaar is met menselijke intelligentie**.

Machine Learning

- Machine learning is het deelgebied van AI dat "computers het vermogen geeft om te leren zonder expliciet geprogrammeerd te zijn".

- Machine learning is de studie en constructie van algoritmen die kunnen leren van en voorspellingen kunnen doen over data

are designed to recognize patterns. They interpret sensory data through a kind of machine perception, labeling or clustering raw input. The patterns they recognize are numerical, contained in vectors, into which all real-world data, be it images, sound, text or time series, must be translated.

It can be taught to recognize images for example, and classify them according to the elements they contain. (Makes you think about the captures you are required to solve to show that you are not a bot...)

This works on a system of probability; It is able to make decisions, statements or predictions based on the data it given. Adding a feedback loop to this enables "learning" and thus modifies the approach taken to resolve a problem in a future.

Machine Learning applications are being used nowadays already to analyze for example if a text written by a person is a complaint or a praise… This has also been used in applications to hinder online bullying. Other things ML is able to do is listening to a piece of music and deciding if it is likely to make someone happy or sad, thus also being able to find other pieces of music to match the mood. Some ML have gone as far as composing their own music to adapt to a certain mood.