> ### ℹ Metadata
>
> - Id: EU.AI4T.O1.M3.2.1v
> - Title: 3.2.1 Video: Of Machine Learning and Data
> - Type: video
> - Description: A video specifically dedicated to machine learning with highlights on supervised and reinforcement learning, neural networks and deep learning.
> - Subject: Artificial Intelligence for and by Teachers
> - Authors:
>   - AI4T
>   - Mooc "Intelligence Artificielle...avec Intelligence"
> - Licence: CC BY-SA 2.0
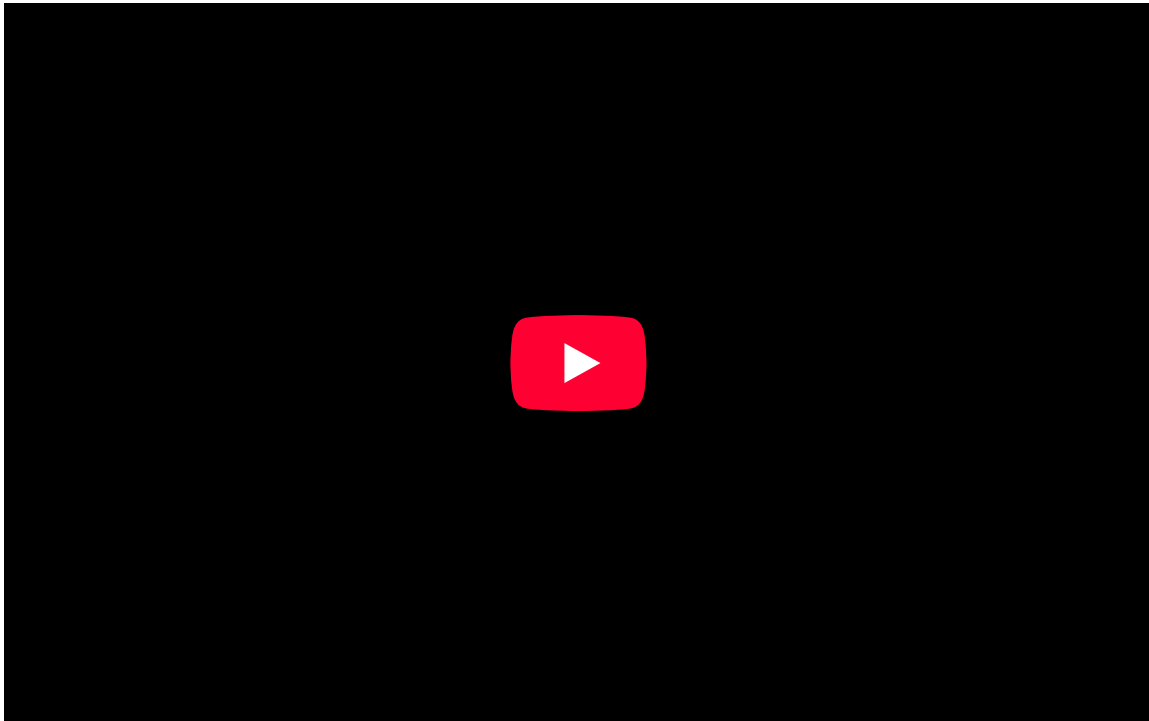> - Date: 2022-11-15

VIDEO: OF MACHINE LEARNING AND DATA

This video is more specifically dedicated to machine learning. It is still a generalist video, with a humorous tone, which can be used in class.

The video also provides an overview of some machine learning concepts in the form of a cartoon:

- Machine learning: from 0'55" to 1'50"

- Supervised learning: from 2'03" to 2'41"

- Reinforcement learning: from 2'42 to 3'07"

- Neural networks & deep learning: from 3'23" to 5'12"

Explanation
Watch the video below (9'35")

Synopsis

The video presents the different approaches to learning. On the one hand the symbolic approach and on the other hand the numerical approach. The video then describes machine learning with its two main modes of operation: supervised learning and reinforcement learning. Deep learning (or deep neural network) is then discussed, which is one of the modalities of machine learning and is inspired by the functioning of the brain.

In addition to the algorithms, which were mentioned at the beginning of the video, *Guillaume* reminds us of the importance of data. Because these data must be numerous, and correctly labelled, to allow AIs to learn correctly, and to make satisfactory predictions. This is an opportunity to come back to the "manufacture" of data and its challenges. In its last part, the video finally discusses the environmental impact of AI.