

# HOW TO SURVIVE A CONVERSATION ABOUT ARTIFICIAL INTELLIGENCE?

Are you sometimes lost in jargon when talking about artificial intelligence? Have you ever struggled to define basic AI concepts and to talk about them in a relatable manner? Do you have difficulties understanding the sometimes subtle differences between AI-related terms?

The Knowledge Centre Data and Society summarized 8 concepts that often occur in conversations about AI. Applications of AI are a combination of some of these concepts and systems. Knowledge of these 8 concepts should allow you to take part in a basic conversation on AI.

Our next brAlnfood will look in more depth at the ethical and legal concepts that are part of a conversation about AI.

Sources of inspiration:

The International Dictionary of Artificial Intelligence, William Raynor, 1999.

AI Knowledge Map: how to classify AI technologies. A sketch of a new AI technology landscape, Francesco Corea, 2018.

The Artificial Intelligence dictionary for beginners, Heuritech, 2018.

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## DATA

**Information that can inform decisions.** Computer data is information in an electronic format stored or processed by a computer.

*E.g. text or numbers, but also images, audio and video clips, ...*

## MACHINE LEARNING

Adaptive learning systems that learn how to make decisions or carry out tasks. When machines or tools receive more data, they automatically improve as the **algorithms in the machines discover patterns** in the collected data. They do so independently without being explicitly told how, but relying on examples or suggestions.

## NATURAL LANGUAGE PROCESSING

A field that looks into how machines can read, understand, manipulate and derive meaning from **human language**. It allows interaction through natural language, in a spoken or written manner.

*E.g. smartphone assistants, chatbots, news summarization from thousands of sources, ...*

## ALGORITHM

A **succession of rules and instructions** that achieves a predetermined goal. An algorithm reads, searches and sorts data in order to create knowledge.

## DEEP LEARNING

An advanced form of machine learning that utilizes techniques inspired by our (limited) understanding of the human brain. These techniques are termed **(deep) neural networks** and require huge amounts of data and processing power, providing high performance in numerous tasks.

## COMPUTER VISION

A field that aims to make computers see, interpret and understand the **content of digital images and video streams**.

*E.g. object and face detection, fingerprint recognition, augmented reality, ...*

## REINFORCEMENT LEARNING

Goal-oriented systems which learn how to attain a complex goal and adapt to their environment over time. The systems learn by making use of an (externally provided) **evaluation of how well they are doing after each action they take**.

## ROBOTICS & ROBOTS

A branch of engineering that involves the conception, design, manufacturing and operation of robots. Robots are programmable **machines that perform a series of actions (semi-)autonomously**. Robotic Process Automation is used to automate mundane and repetitive tasks.

*E.g. cobots that closely collaborate with humans in e.g. factories, ...*

brAlnfood of the Knowledge Centre Data & Society



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