

ARTIFICIAL INTELLIGENCE

The field of AI is very broad and multidisciplinary, we can currently find research on AI in several domains, i.e. medicine, genetics, robotics, and education. However, AI ideas in computer science date back 1950's. The recent boom is particularly related to the availability of huge amounts of data and powerful computers to compute all this data (Russell and Norvig, 2010). Definitions of AI are still evolving but for the purpose of this programme, we can say that AI systems consist of pieces of software developed and coded by humans based on mathematics and statistics that use data to generate outputs (answers, predictions, recommendations...) or perform tasks (EU, 2021).

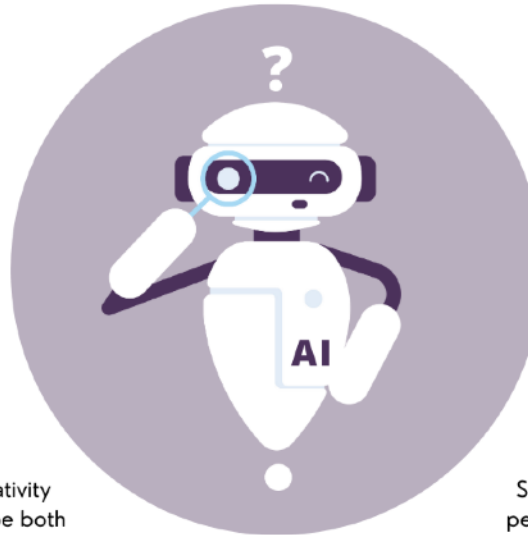
AI AND DATA LITERACY

AI and Data literacy includes all key ideas (Touretzky et al., 2019) and competencies (Long and Magerko, 2020) everyone should be aware of AI and Data, as developing AI knowledge is paramount for all of us as 21-st century citizens (Floridi et al., 2018). We are already used to interacting in our day-to-day lives with AI technology: chatbots, voice assistance, and streaming platforms with their recommendation systems. One among many other, very well-known technique is Machine Learning. It is based on developing or using models that can "learn" from data to be able then to give answers on data never seen before. Data are numbers. Data can represent and track our habits. They can be collected through sensors. Thanks to data analysis and science we deduct information from data that can help us in discovering cures or monitoring climate change.

AWARENESS

AI is challenging us to rethink our ways of living and our ideas of creativity and learning. The implications of this technology in our society can be both positive and negative. As AI relies on data and humans, AI models can be biased and can give wrong answers. Data in fact are not neutral just because they are numbers, and they cannot capture everything. There are many ethical debates around AI and autonomous machines. We do not have all the answers yet, this is why it is so important to start asking questions.

What every Teacher should know about Artificial Intelligence



AI FOR GOOD

With AI we can solve real-world problems and we have the responsibility to make sure this technology is beneficial for humans (Floridi et al., 2018). Applications of AI for good relate to the preservation of the environment and biodiversity, our health, inclusion, arts, and much more. Software based on AI that can predict areas at risk of deforestation using satellite images. Other applications are ecosystem monitoring. AI and data analytics platforms can gather data on health and develop applications to help doctors and people in detecting diseases. Social robots are used with dementia patients or to teach foreign languages in schools, and used with autistic children.

TEACHER ROLE

"Being children" in the era of AI and big data means having adults who share pictures of you, using apps and wearable devices to monitor health and wellbeing habits, engaging with chatbots, voice assistants, and smart toys, and being monitored on school performances and sharing contents on social media once teenagers. The United Nations Convention on the Rights of Child (UNCRC) set in 1989 non-negotiable standards to protect children: Provision, Protection, and Participation. Rethinking these principles in the era of AI and big data means ensuring ethical AI, privacy, and safety rights for children. AI should be understandable, safe, equal, and inclusive (UNICEF, 2020). Your role is a key game changer for the future of our society as you have the opportunity to engage with children promoting the positive, aware, and creative use of AI.

AI IN EDUCATION

Software based on AI can track, process, and analyse data from student performances to monitor their learning progress or can provide real-time feedback for teachers. Teachers are already advising peers for the use of GPT (models that can produce "human-like" text, code, and much more) in making teaching easier (i.e. writing reports, and exercises) or how students could use it as support (e.g. starting with writing) (Lovegrove, 2023).



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