academic publishers

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE (ISSN: 2692-5206)

Volume 04, Issue 03, 2024

Published Date: - 13-05-2024

THE RISE OF AI IN EDUCATION: EMPOWERING TEACHERS WITH AUGMENTED INTELLIGENCE

Nigmanova Zebo

Foundation Course Leader of the Department of International Financial Management at "International School of Finance Technology And Science" institute

Annotation

This article contains information about artificial intelligence, one of the currently developing fields. At the beginning of the article, some definitions of the word artificial intelligence are given, and the history of the origin of this word is also covered. The article also lists types of artificial intelligence. The main part of the article contains information about the effectiveness of artificial intelligence in the field of education. In the last part of the article, some disadvantages of this field are presented. So, the article comprehensively covers this area.

Key words

modern technologies, artificial intelligence, John McCarthy, superintelligence, jet cars, theory of mind, self-awareness, neural system, streamlines assessment, neural network.

Nowadays, modern technologies are entering all spheres of human life. In particular, artificial intelligence is currently entering the field of education. A great future is predicted for artificial intelligence. This technology has now become one of the most rapidly developing and promising. Smart voice assistants, neural networks that draw pictures, write texts and music—this won't surprise anyone today. There is more and more talk about the use of artificial intelligence in education: there are already such cases.

The term "artificial intelligence" refers to programs and systems that can teach themselves, analyze information and make predictions and recommendations based on the data they learn. Artificial intelligence (AI) is a technology that allows a machine to solve problems normally solved by intelligent thinking. AI imitates human behavior; the main feature is the ability to self-learn based on the data obtained and "experience". In simple words, it is a computer technology that allows programs and systems to "think" and "draw conclusions" just like people do. AI uses algorithms, mathematical models, and data sets to "learn" and "make decisions" based on that data. Artificial intelligence can process large amounts of data, identify patterns, identify information and provide answers. It can also be used to solve problems in various areas, such as fraud detection, medical diagnostics and business analysis. Artificial intelligence (AI), in its broadest sense, is intelligence exhibited by machines, particularly computer systems. It is a field of research in computer science that develops and studies methods and software that enable machines to perceive their environment and uses learning and intelligence to take actions that maximize their chances of achieving defined goals.[1]

The term "Artificial Intelligence" was first used by John McCarthy, who became its author. He convened the first conference in 1956, which focused on machines that could think like humans, learn, collect more data, and process information.[2]

[1] Russell & Norvig (2021), pp. 1–4.

[2]Mariya Ushakova. Types of artificial intelligence - their features and applications. https://mitm.institute/journal--informatika--vidy-iskusstvennogo-intellekta-ih-osobennosti-i-primenene.

Automation of the functioning of any business, government agency, production or trade structure, logistics, educational and medical institutions and one person - all these are areas of application of artificial intelligence. The goal of artificial intelligence is to simplify the solution of complex problems that are difficult to process manually. Therefore, scientists predict a great future for AI. The goal of AI is to use automation of manual labor by simulating the human mind.

Today, many problems are solved automatically, with the help of artificial intelligence (superintelligence) - programs installed in machines. Technologies do not stand still and AI is constantly evolving, although it can make mistakes.

The general interest in artificial intelligence is easy to explain: this technology opens up incredible opportunities for humans to automate various processes, especially labor-intensive and boring ones. Where we get tired, procrastinate or get distracted, the machine continues to show one hundred percent efficiency and high accuracy. There are already a lot of opportunities, and their number will only grow - programs and services that are capable of self-learning help people solve a variety of problems.

Artificial intelligence is divided into the following types based on functionality:

1. Jet cars

This is a basic system that is not capable of storing the experience gained. She is unable to learn and has no memory. The system focuses on solving these problems. This type of AI is in demand in business when a quick response is needed, but experience is not important. For example, the jet system defeated world chess champion Garry Kasparov in 1997.

2. Intelligence with limited memory.

This type of AI systems has been around for a long time. He stores and uses experience. Such intelligence can improve work by analyzing previous experience. For example, with such intelligence - a robot vacuum cleaner. The robot moves around the room and cleans it based on a map that is built using sensors. Another example is that unmanned vehicles collect and store information about nearby cars: speed, distance

3. Theory of mind.

This is a neural system that understands human emotions and is capable of interaction. This species is at the development stage. For example, social robots - their purpose is to interact with people in a natural and understandable way

4. Self-awareness

This type of artificial intelligence is super smart, it has feelings and emotions, it is considered from the realm of science fiction. This system can surpass humans in intelligence and solve problems better. Self-awareness is in the process of research and development, the creation of this new type of AI raises a number of ethical and social norms

Following how artificial intelligence can enhance the future of teaching and ensure effective learning.

First of all, virtual and augmented reality enabled by AI will transport classrooms into immersive learning landscapes. Students could explore ancient civilizations, walk with dinosaurs, interact with 3D scientific models and historical artifacts, or even travel through the human body on fantastic virtual field trips.

Moreover, AI is more effective for quickly and accurately testing acquired knowledge, which simplifies the assessment process. Student has the opportunity to engage in self-education with the help of AI, and not by transferring knowledge from person to person.

In addition, streamlines assessment: AI-based assessment tools can provide quick and accurate feedback on student performance. It eliminates human bias in grading, ensuring a more inclusive learning environment. Educators can identify areas for improvement from the detailed evaluation results and adapt their teaching strategies.

Furthermore, artificial intelligence can create a learning environment that adapts to a person's learning needs and makes learning more effective. Artificial intelligence has the potential to speed up learning processes and reduce the manual work involved in education.

Besides that, the pace of learning for each person and the nature of assimilation of new information

are deeply individual. However, in the conditions of mass learning, it is difficult to take into account all these nuances - for example, a teacher, when explaining new material, focuses on average indicators. Adaptive learning is based on the needs of a specific student. It is possible to create an individual training track using artificial intelligence. And the use of AI in education will make it possible to find problem areas in training courses - sections and tasks in which students make the most mistakes. This is very convenient for the teacher – he or she can pay more attention to these aspects, for example, by additionally working on a complex topic.

Similarly, a neural network can also be useful for self-diagnosis. By analyzing the history of user actions, the educational platform with integrated AI offers targeted content that precisely corresponds to the objective level of knowledge. The technology built into educational services also helps with the development of specific practical skills: for example, on an educational platform it recognizes the student's speech, and then analyzes grammar, pronunciation and vocabulary and shows errors.

The possibilities for using AI in education are already impressive, and they will only expand further. Thanks to machine algorithms, it is possible to structure and analyze large volumes of information, gather people into teams, improve subject skills, and create individual career tracks. However, the most important aspect of education, the "student-teacher" contact, remains unchanged: modern technologies are intended only to help establish it. The tasks of the machine are still set by humans - and that's great! Artificial intelligence can be an excellent assistant for the entire field of education, but so far it will not be able to replace teachers themselves and become a key link in the transfer of knowledge. What is more, the AI cannot show emotions, which can be a problem when interacting with humans in some cases. The need for a large amount of data for training. AI requires a lot of data to train and tune its algorithms, which can be a problem if there is not enough data.

References:

1. Mariya Ushakova. Types of artificial intelligence - their features and applications**.**
2. Russell & Norvig (2021), pp. 1–4.
3. Kaplan, Andreas; Haenlein, Michael (2019). "Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence". Business Horizons. **62**: 15–25.
4. McMorrow, Ryan (19 December 2023). "Andrew Ng: 'Do we think the world is better off with more or less intelligence?'". Financial Times.
5. Wiggers, Kyle (9 April 2024). "Google open sources tools to support AI model development".