

HOW ARTIFICIAL INTELLIGENCE HAS CHANGED E-LEARNING EDUCATION IN THE META ERA

Kyriakos Kouveliotis¹ and Maryam Mansuri²

¹*Prof. Dr., Provost & Chief Academic Officer*

²*Dr., Lecturer & Head of Postgraduate Studies
Berlin School of Business and Innovation, Germany*

ABSTRACT

The world is changing at an incredible rate, and different processes are using technology more and more every day. One of the most widely used applications of artificial intelligence today is to simplify employee tasks and office automation. In the future, robots can, like an author, produce articles or create conferences and instructional videos. The more intelligent AI becomes, the more advanced the new education system will be. In such days, the educational method for each person may be different depending on his/her situation. The speed of teaching and learning, interaction with the teacher, and reaching answers in the intelligent education system increases. Artificial intelligence provides a variety of facilities for students with different physical problems. An increasing need for the use of the latest technology advances in learning students and students will accelerate their growth and progress and gives them the ability to confront the challenges of the ever-competitive world. After the epidemic of the COVID-19 virus, both teachers and knowledge have been educated to a new understanding of technology use, which means that strategies for coping with real-world restrictions (such as what time limitations caused by this pandemic and quarantine have been witnessed) are more and more practical.

KEYWORDS

Artificial Intelligence, Meta, E-learning, Education, COVID-19.

1. INTRODUCTION

Artificial intelligence (AI) has been introduced as a branch of science that tries to simulate the methods that humans use to solve their problems. AI experts try to teach the machine to act like a human. The term intelligence is defined as the competence or ability to solve a problem, and artificial means any systematic human method that may accomplish problem-solving goals. Meta AI refers to an artificial intelligence system that can automatically learn from given data or adapt quickly to new environments with minimal supervision by human experts (Canhoto and Clear, 2020). Because meta-AI can be a great automation tool, the meta-AI system can be used in a variety of deep learning projects. In addition, in this highly connected and super-intelligent society, the demand for data processing is increasing. With this acceleration, meta-artificial intelligence will surely benefit many users in the near future.

In this article, first, the meta-artificial intelligence system will be introduced. Then, the opportunities and facilities that artificial intelligence provides to students are examined. Given the experience that the world has faced in recent years through the encounter with the COVID-19 pandemic, and virtual education has been used to an incredible extent in the world, the role of artificial intelligence in the future of virtual education is undeniable and necessary to study. The most challenging part of E-learning at the beginning of its widespread use in the world was related to exam security. In the following, the solutions provided by meta-artificial intelligence experts are discussed. In addition to the advantages that every new technology offered in the world has, it also has disadvantages and weaknesses that its use does not require the presence of human thought and ethics.

2. BODY OF PAPER

2.1 The Meta AI System

In the development of a meta AI system, three main parts must be considered: creating a meta artificial intelligence interface, developing core algorithms, and creating a cluster infrastructure(Arrieta et al., 2020). An interface must first be created to provide users with detailed information about the system process, as well as to receive data and other inputs from them. Also, design interfaces to test the models produced and their distribution. Second, implement two main types of algorithms to implement automation(Pappa et al., 2014).

One is the technology that automatically finds the most appropriate neural network structure for learning data sets. Online architecture view has been proposed, which allows efficient search of network architecture with optimization algorithms. In addition, try to implement a technique that can search not only predefined modules in networks but the entire structure of neural networks. Another is the automatic selection of meta-parameters used in machine learning. For example, before training, professionals must properly adjust meta-parameters - the parameters needed for deep learning - based on their experience and knowledge, taking into account the characteristics of the tasks assigned to them, but this requires considerable manpower and time(Bengio et al., 2021).

By automatically selecting meta-parameters, services are designed so that the proposed models can operate efficiently at the request of users, and at the same time the participation of experts and users is minimized (Wang et al., 2020). One of the important areas that AI will transform in the future is the field of modern education(Holmes et al., 2019). Computers today are able to learn and solve the most complex problems. One of the most important uses of AI today is to simplify the tasks of employees and office automation. Graduation books, registers, and anything on paper in modern education will be destroyed. In addition, teachers no longer have to spend long hours correcting exam papers and entering grades. AI lonely will play the role of an educational staff. The ranking of scientific articles, grades, and all scientific standards will be more accurate. In addition, teachers and professors will have more time to educate and communicate with students (Dwivedi et al., 2021). AI and education are growing in parallel. Smart content is one of the elements that will bring dramatic changes to modern education. In addition, artificial intelligence has been introduced in writing textbooks and schools will be equipped with digital books. Netex Learning is one of the companies active in the field of modern education. By visiting the company's website, people can receive a curriculum with the help of AI and find their strengths and weaknesses. The most interesting part is that they can receive audio and video files, which are made entirely by AI, according to their needs(Sethi et al., 2020).

2.2 AI Opportunities for Students

All students are more interested in some of the lessons. In some subjects, they score better and in others they are weak. In the traditional system, a single teaching method is used for all students. They are given similar assignments and all take the same exam. AI has solved this problem. In an AI-based education system, new education will be unique to each person and the student will be assessed before reading a book or entering the classroom. The strengths and weaknesses of each student are measured and the academic process is based on individual abilities. The smarter AI becomes, the more advanced the modern education system will be. In the not-too-distant future, the system may be able to assess students' conditions by scanning their faces. It is even possible for a student to change his or her teaching style completely if the student has a very difficult learning experience(Holmes et al., 2019). Fast feedback is one of the keys to successful training. AI can provide the conditions for students to receive answers from their teachers as soon as they ask a question. Some universities, for example, use a robot named Alexa for the day-to-day needs of the university. This robot can answer frequently asked questions of students. In addition, the use of such systems is very interesting and exciting for students and can motivate them to study(Ostrom et al., 2019).

2.3 AI Future Perspective in E-Learning

AI will help to remove borders in this area, and modern education will become a global thing. Technology increases the speed of knowledge transfer by facilitating new education and learning. In the future, the transfer of knowledge and learning around the world will accelerate dramatically. Artificial intelligence provides access to education for students with special needs: deaf and hard of hearing, visually impaired, people with special and severe diseases use artificial intelligence tools and teach them successfully (Valadão et al., 2011). Students always have access to learning with the help of online-based artificial intelligence. AI using IT technology can increase efficiency in many areas. The most important part of using artificial intelligence can be considered as helping humans to know their purpose. Students choose a job by realizing their purpose and talent. With the spread of COVID-19 pandemic and the holding of virtual education in all educational centers around the world, despite the educational concerns, the closer we get to the student exam season, the more we worry about holding the exam. But due to the restrictions, we had to use the online test. There are many virtual tools for conducting online exams, but artificial intelligence tools help to conduct online exams as well as possible to solve predictable problems during the exam.

2.4 Application of AI in Online Examinations

Artificial intelligence tools that can be used when taking an online test are: 1. Viewing pictures of students when taking an online test by the teacher. This tool makes it easy for the teacher and management to record students' performance and monitor their behavior during the test. 2. Using artificial intelligence (image vision) to identify students. 3. Use of students' position (GPS). With this tool, the teacher can observe the position of the students during the test, and if the students are holding the test in close positions, the system will notify the teacher of the status. 4. Use of response analysis. Using artificial intelligence, students with the same answer can be identified. 5. Use time tools in response. Even if the order of the questions in the online test is different, the AI detects which students are answering the same questions at the same time. 6. Analysis of answers for learning. Artificial intelligence helps the teacher to determine students' understanding of the content according to the students' answers to the questions (hard/medium/easy). This tool helps the teacher to identify students' learning problems (Nigam et al., 2021).

2.5 Negative Aspects of Using AI in the Educational System

With all these details, the negative aspects of using robots in the educational system should not be overlooked. For example, a robot is not able to interact socially like a human. They cannot listen to students' social problems or solve their problems. This is especially true for first-year students, where the role of social and moral behaviors is more important than instruction (Marcinkowski et al., 2020). The main issue here is the stagnation or non-growth of Gross Domestic Product (GDP) at the expected unemployment rate. With such a situation, people do not acquire the skills in demand, and therefore we will see a deep gap between supply and demand (Wirtz et al., 2019).

3. CONCLUSION

The world is changing at an incredible rate, and different processes are using technology more and more every day. One of the applications of AI, which is still very effective today, is the simplification of tasks of employees and office automation. In the future, robots can, like a writer, produce articles or create conferences and instructional videos. The smarter AI becomes, the more advanced the new education system will be. AI provides a variety of possibilities for students with different physical problems. Because meta AI can be a great automation tool, the meta AI system can be used in a variety of deep learning projects. In addition, in this highly connected and super-intelligent society, the demand for data processing is increasing. With this acceleration, meta artificial intelligence will surely benefit many users in the near future. Finally, despite all the statistics and predictions, only time can show the real and amazing impact of artificial intelligence in education.

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