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ADVANTAGES AND CHALLENGES OF USING ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS

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Abstract:

Nowadays, technology in modern society is developing rapidly, especially artificial intelligence is becoming an integral part of our daily lives. This opens up new perspectives for both teachers and students in the field of education. This article is devoted to the effective use of artificial intelligence and its correct application in the field of education.

Keywords: intelligent system, artificial intelligence, expert system, education and science.

The development and application of artificial intelligence (AI) is a natural stage in the development of the modern technological society, which is characterized by the universal informatization of various spheres of human activity. AI methods and technologies are now widely implemented in everyday life through various intelligent systems, mobile applications, and web services that contribute to increased production, improved communication, security at both the corporate and personal levels, and so on. One of the features of intelligent systems is their ability to accumulate and update knowledge through learning and self-learning, which provides a high level of automation in the process of making management decisions and interacting with a person in natural language. These characteristics allow AI systems to efficiently solve various problems, such as processing heterogeneous and incomplete information, identifying cause-and-effect relationships, analyzing large amounts of data, and predicting events based on available information from various sources. The question now is not whether tools like ChatGPT should be used, but how best to apply them in the educational process, from schools and universities to academic research institutions. The questions discussed among the pedagogical and scientific communities include: "How to use ChatGPT in educational institutions?", "What competencies and skills do students and teachers need to effectively use this technology?", "How to plan and manage the use of artificial intelligence tools in the future?"

In today's society, technology is developing rapidly, and artificial intelligence is becoming an integral part of our daily lives. In the field of education, it opens up new prospects for both teachers and students. Artificial intelligence has a vast amount of knowledge and is able to generate information instantly, making it an invaluable assistant for educators. It can automate routine tasks, adapt to individual learning needs, and provide new ideas for training sessions.

Let's consider examples of the use of artificial intelligence in the field of education.

1. Artificial intelligence can also assist history teachers by helping to create interesting questions for discussion in the classroom. For example, you can ask artificial intelligence to develop questions about important events of World War II by offering several answer options, of which only one will be correct and highlighted with an asterisk '*'. Questions like these can stimulate discussion about historical events and help students learn the material better.

2. Assessment of educational projects. One of the important benefits of using artificial intelligence is its ability to automate the evaluation of educational projects. This allows teachers to effectively evaluate not only tests and tasks with short answers, but also project work, significantly saving time. In addition, artificial intelligence is able to provide preliminary grades for students' work by analyzing their structure and content. To conduct an assessment, it is necessary to provide artificial intelligence with information about the work that it will analyze. For example, when evaluating educational projects, electronic versions of work can be provided for further analysis and evaluation. Another important aspect is the ability to detect plagiarism and check the originality of the texts. This helps to maintain academic integrity and ensure that the uniqueness of students' work is verified. To do this, you can request artificial intelligence to analyze the text of the work for similarities with other sources.

3. Assistance in the development of training materials. The application of artificial intelligence also provides a significant assistance in the creation of educational materials. For example, artificial intelligence can be involved in the formation of exemplary curricula, which optimizes the training process, making it more efficient and less time-consuming. Generating additional texts, compiling tasks and exercises becomes easier with the use of artificial intelligence, which

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contributes to a deeper and more diverse assimilation of educational material.

4. Processing of data on learning achievements. In the field of data analysis, neural networks play an important role in helping educators analyze progress and identify problematic issues in the learning process. They can automate the creation of reports on learning achievement, making it much easier to track student progress. In addition, when integrating artificial intelligence into educational processes, neural networks are able to predict students' future outcomes based on their current level of knowledge and learning history. This allows teachers to plan the educational process more effectively.

5. Interactive interaction with students and interactive testing. The application of artificial intelligence in education contributes to a significant improvement in the educational process by creating a more personalized and adaptive learning environment. The use of artificial intelligence technologies opens up opportunities for teachers and students to interact on a deeper level, which promotes critical thinking and independent learning.

One of the main advantages of using neural networks in education is the ability to quickly and accurately process large amounts of information. This makes it possible to develop more effective teaching methods and analyze student progress in real time. This approach helps teachers to quickly respond to emerging problems and adjust the educational process, and students to receive timely and useful feedback. In addition, the use of neural networks allows you to automate routine tasks, such as checking homework, which reduces the burden on teachers and frees up time for creative and productive work. In addition, the use of neural networks can contribute to the creation of virtual assistants for students who will be able to help them solve problems and give advice on their implementation.

6. In a learning atmosphere, there are often moments when students ask the same questions related to the material, homework, or organization. Artificial intelligence allows you to instantly provide accurate answers to such standard requests, which, in addition to saving the teacher's time, also contributes to quick support for students, constantly improving their learning process. By creating a single list of the most common requests, you can quickly get detailed answers to them, and then publish this guide in the required format – printed or electronic.

One of the important applications of neural networks is to improve the process of checking educational tasks. Using machine learning algorithms, neural networks can quickly and accurately analyze vast amounts of work, identifying errors and pointing them out to students. This allows you to reduce the time it takes to review assignments and focus more on explaining complex aspects to students and feedback. In addition, neural networks can contribute to the development of new teaching methodologies based on the analysis of extensive information and individual needs of students.

Here are examples of neural networks that promote learning and learning:

1. BlackBox is an artificial intelligence that aids in learning programming by supporting more than 20 programming languages.
2. MathGPT is a neural network designed to solve mathematical problems using deep learning to understand mathematical formulas and solve them effectively.
3. Writefull is a neural network built into a text editor that can check text for errors, typos, and repetitions. In addition, it helps organize information, paraphrase sentences, and suggests suitable headlines.
4. Tome is a neural network for automatic presentation creation that creates slides and texts based on the user's description of the required content.
5. DeepL is an online translator that uses artificial intelligence that is able to take into account the context and provide high-quality results even for large texts.
6. YandexGPT is a neural network from Yandex, operating on the basis of ChatGPT technology. It is capable of creating texts on various topics, writing code, interacting with users, searching for information on the Internet, and translating texts.
7. 01Math is an online math teaching platform that analyzes students' progress and customizes lessons and assignments to their individual needs. It provides materials from textbooks, helps to prepare for the Basic State Exam and the Unified State Exam, and also offers problems in geometry and trigonometry.

The integration of neural networks into the educational process can significantly improve the quality of learning, making it more attractive and interesting for students. However, it is important to take into account that the use of artificial intelligence should contribute to improving the effectiveness of learning and increasing the level of knowledge, and not replace human interaction and communication between participants in the educational process.

First of all, the limited transparency of artificial intelligence should be noted. Despite its effectiveness in solving certain problems, the use of AI can also have

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negative consequences in the educational process. For example, educators can use it to assess students' knowledge, potentially contributing to bias and discrimination.

The next important aspect is the potential loss of control over the educational process. For example, the creation of personalized learning plans using neural networks can lead to a situation where students receive only the information that corresponds to their interests and current level of knowledge, which can ultimately reduce the diversity in learning and reduce motivation.

As a result, it is important to note the problem of data safety. The use of neural networks in the educational process can pose a risk of leakage of students' personal information, especially if teachers do not provide an adequate level of data protection or use artificial intelligence to collect information without the prior consent of students.

Undoubtedly, the use of artificial intelligence in the field of education has great potential. However, it is important to approach this issue carefully to avoid replacing human interaction and communication in the learning process. A balance must be struck between the use of new technologies and the preservation of traditional teaching methods.

The use of artificial intelligence can automate a variety of routine intellectual tasks, including word analysis and processing, which allows teachers to pay more attention to more complex and meaningful aspects of their work. In general, the introduction of artificial intelligence has the potential to significantly improve the educational process, making it more flexible and interactive.

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