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PECULIARITIES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS

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Abstract: The article is devoted to the types of artificial intelligence systems according to their origin, development and capabilities, as well as the factors that improve the quality of education through its application in the educational process. As well, it is studied the experience of developed countries' artificial intelligence systems' application in education and the application of artificial intelligence systems in education system of the country.

Key words: artificial intelligence, intellect, computer, smart school, robot, science fiction, robot teachers.

Introduction

Artificial intelligence has become one of the most important technologies in the world today. At the beginning of the last century, many of the scenes that we can only see in movies and various science fiction novels are becoming a reality with the introduction of artificial intelligence into our lives.

Today, in world practice, Canada, Singapore, the United Arab Emirates, Finland, Japan, China, Italy, Tunisia, the United Kingdom, the United States, Sweden, Mexico,

the European Union, Kenya, Denmark, France, Australia, the Republic of Korea, India and Germany. such states have announced strategies for the development of artificial intelligence.

Relevance of the topic

Today's demand is to ensure the rapid and widespread use of artificial intelligence technologies in world practice, as well as the use of such digital data in the life of our country, the creation of favorable conditions

for the training of qualified personnel in this field.

The term artificial intelligence was first proposed at the Dortmund conference in 1956 by John McCarthy and his colleagues Marvin Lee Minsky, Nathaniel Rochester, and Claude Shannon. John McCarthy is credited as the author of this term. During this time, a great deal of scientific research has been done and is being done, as a result of which the field of application of artificial intelligence is expanding rapidly. Today, artificial intelligence is effectively used in the development of healthcare, energy, mining, agriculture, education, engineering, voice assistants, online chat and communication and software.

Before defining the concept of artificial intelligence, we need to know what intelligence is. Intellect - (lat. Intellectus - to know, understand, comprehend, mind) human mental ability; the ability to accurately reflect and change life, the environment in the mind, to think, to study, to know the world and to accept social experience; the ability to make a decision in solving various problems, to act rationally, to anticipate events. The structure of the intellect includes cognition, memory, reasoning, and mental processes. The development of intelligence depends on social factors such as innate talent, brain capacity, vigorous activity, life experience. The level of intelligence is determined by the concentration of human activity, as well as the results of psychological tests.

From the concept of "intellect" discussed above, it can be concluded that intelligence belongs only to human beings and is a specific measure of human mental ability. It has become possible for psychologists to determine a person's intellectual level through experimentation using special methods.

The definitions of the concepts of artificial intelligence and intelligence are different. The main reason for this is that brain features have not yet been fully explored. The human brain contains countless secrets. However, we do not fully know the working methods and principles of the brain, our basic

knowledge about the functioning of the brain is limited to neurons and their activities. For maximum research of the brain, it is first necessary to understand and explain the functioning of the brain. This resulted in a neurology and accordingly a brain-based learning approach. By analyzing the working algorithm of the brain, a great contribution can be made to the development of computers or smart machines.

A brief analysis of the scientific works of other scholars on the subject. The issues of development of artificial intelligence systems are reflected in the research conducted by Uzbek scientists S.Gulomov, B.Begalov, M.Kamilov, T.Bekmuratov, Sh.Madrahimov, N.Ignatev.

Russian scientists M.Akhmetov, A.Bazaeva, L.Bocharova, A.Lobanov conducted research on the development of artificial intelligence systems and their use in education.

A unified, clear definition of the concept of artificial intelligence does not yet exist. One of the main reasons for this is the diversity of interpretations of scientists working in different fields of science.

Purpose

There are ideas about the emergence, development and capabilities of artificial intelligence systems, as well as improving the quality of education through their use in the educational process. The experience of developed countries in the use of artificial intelligence systems in education, the issues of their application in the education of our country are studied.

The main part

The author of the term artificial intelligence, John McCarthy himself, has given several definitions of artificial intelligence. He described artificial intelligence as "the science and engineering of creating human-like intelligent machines, especially intelligent computer programs." Accordingly, a computer can be described as artificial intelligence if it demonstrates human behavior such as thinking, problem solving, meaning creation, and generalization, i.e., it can use high-level cognitive abilities. According to Nils Nilsson,

another great scientist, author of his research on artificial intelligence and numerous scientific publications in the field, "artificial intelligence is a theory aimed at creating an imitation of natural intelligence." It can also be described as a series of algorithms that mimic artificial intelligence - the human mind.

From the above, it can be understood that research on artificial intelligence has shown that everything in the universe works within a certain algorithm. Accordingly, consciousness is the result of a mathematically very complex algorithm. For most authors of artificial intelligence today, the brain is a structure that performs its functions based on the laws of the external world. This situation means that artificial intelligence has a rational property.

The development and transformation process of artificial intelligence is parallel to the development of computers, i.e. transistors. However, this idea should not lead to the conclusion that artificial intelligence is only related to computer technology. On the contrary, it shows that artificial intelligence is a field that is directly related to many disciplines, from medicine, engineering and industry to psychology, and all of them are structured according to their needs.

At present, we can divide artificial intelligence into three types based on its ability to analyze various scientific literature.

Weak artificial intelligence or narrow AI. Weak artificial intelligence is a type of artificial intelligence that is capable of performing a specific task with intelligence and is the most common and currently available type. Narrow artificial intelligence cannot operate outside the scope and limitations of Google because it is only intended for a single thematic task. That is why it is also called narrow artificial intelligence. Apple Siri is a good example of narrow artificial intelligence, which works within limited limits and predefined capabilities. In addition, playing chess, the operation of self-driving machines, speech recognition and image recognition are examples of narrow artificial intelligence.

General artificial intelligence. General artificial intelligence is a type of mind that can

perform any intellectual task as efficiently as a human being. General artificial intelligence is a system that is intelligent and human-like. At present, there is no such system that represents general artificial intelligence and can perform any function perfectly as a human being. Researchers around the world are now focusing on developing machines with common artificial intelligence. Systems with general artificial intelligence are still being researched and it takes a lot of effort and time to create such systems.

Perfect artificial intelligence. Perfect artificial intelligence is the level of intelligence of systems, machines can surpass the human mind and perform any task better than a person with the ability to know. This is the result of general artificial intelligence. Some of the key characteristics of strong artificial intelligence include: the ability to think, reason, solve puzzles, draw conclusions, plan for themselves, learn, and communicate. Perfect artificial intelligence is still a hypothetical concept of artificial intelligence.

The world economy is going through an important period associated with the transformation of industries in the context of the global pandemic, the digitization and mobilization of this process, the introduction of artificial intelligence in all areas.

One such area is the education system, where many understand the use of artificial intelligence in education as 'robot teachers', which is slightly different from the reality. Artificial intelligence can be found in personalized education systems, data retrieval, chatbots, special education systems for children, inclusive education systems, learning process monitoring systems, swimmer knowledge assessment systems. Using such systems can not only increase the knowledge of swimmers, but also reduce the workload of teachers.

One of the important requirements for the organization of modern education with the help of artificial intelligence is to achieve high results in a short time without spending too much mental and physical effort. To provide certain theoretical knowledge to swimmers over a period of time, to develop in them the

skills and competencies for a particular activity. Assessing the level of knowledge, skills and abilities acquired by them requires a high level of pedagogical skills from the teacher. The implementation of this important task requires the integration of traditional methods of teaching in secondary schools with advanced pedagogical and information technologies.

According to the Ministry of Education of Russia, in 2021, schools will begin testing "Artificial Intelligence" training modules. By 2024, artificial intelligence classes will be taught in half of all schools under the regular curriculum.

Artificial intelligence classes will be introduced in Korean public schools from the second semester of 2021. When topics are included in the school curriculum next year, high school 2nd and 3rd graders can take an artificial intelligence course or take artificial intelligence math lessons.

China and the United States are leaders in research and education in the field of artificial intelligence. In addition to the location of world-renowned institutions of higher education and research in these countries, countries have fully regulated the mechanisms that support innovation and provide a large amount of financial assistance to institutions. As a result, China and the United States are attracting more and more educated professionals from around the world.

In order to develop science in our country, great strides have been made, and life itself shows that great results can be achieved in the socio-economic spheres through the use of digital technologies in every field.

As noted in the Address of the President of the Republic of Uzbekistan Sh.Mirziyoyev to the Oliy Majlis, the development of the digital economy is one of the most important and priority areas for Uzbekistan in the coming years.

As another confirmation of these priorities, the draft decree of the President of the Republic of Uzbekistan on "Strategy for the development of artificial intelligence in Uzbekistan in 2021-2022" was discussed,

based on the tasks set out in the Strategy of Innovative Development of the Republic of Uzbekistan for 2019-2021.

The purpose of the decree is to systematically launch national research and development activities in the field of artificial intelligence and to effectively reform education.

The main task of the strategy is to rationalize the mobilization of human resources and encourage the creation and use of digital products in achieving the goals set in the strategy for the development of artificial intelligence in 2021-2022.

In accordance with the Strategy "Digital Uzbekistan - 2030" and in order to accelerate the introduction of artificial intelligence technologies and their widespread use in our country, to provide access to digital data and their high quality, to create favorable conditions for training qualified personnel in this field. Resolution No. PQ-499b of 17 February "On measures to create conditions for the accelerated introduction of artificial intelligence technologies" was adopted. The resolution aims to develop a single legal framework for the development and use of artificial intelligence technologies in the economy and social sphere of the country, in the system of public administration, responsible security and transparency.

It should be noted that the introduction of the "Smart School" program, developed on the basis of artificial intelligence systems, in the education system has several advantages.

Automatic assessment of the quality of knowledge. Artificial intelligence can offer several ways to do this. Although it cannot completely replace human evaluation, it can be qualitatively closer to it.

Smart School software based on artificial intelligence systems also saves teachers' time in schools; identification of gaps in education in a short period of time by swimmers, disciplines, topics, classes; analyzing the mental and physical development of swimmers and creating a number of other opportunities that facilitate school management.

Human memory is not perfect, and the program reminds teachers and parents of

information about swimmers' education and even provides separate warnings for situations where they are not actively participating in lessons and have poor coordination.

Tracking swimmers' behavior. On the basis of artificial intelligence systems, various analyzes are carried out, which allow to observe the spiritual, spiritual, moral processes of students, as well as the transfer of knowledge. As a result, on the basis of the program, swimmers contribute to the development not only mentally and physically, but also spiritually.

At the same time, the Smart School program identifies the gaps that need to be addressed individually with the learner and on which topics by creating gaps in the learning process, interruptions in the learning process, low-learning learners and gifted learners in the disciplines.

In addition, the application of artificial intelligence in the educational process will force teachers to change. In particular, as a result of the cooperation of teachers with the "Smart School" program, schools will help to teach students faster, more efficiently and better. This leads teachers to work on Facebook and improve the quality of teaching.

The introduction of artificial intelligence systems in schools will optimize and automate the work of many teachers. This allows teachers to spend more time working with their students and improving the quality of education.

Many scientists are debating the future of artificial intelligence. The fact is that while some cars are concerned that people's privacy may be compromised and even armed, other scientists are positive about it. They point out that self-driving machines in an artificial intelligence system can be used to calculate the most beneficial, least harmful option with the lowest risk and the lowest losses. Another controversial situation with artificial intelligence is related to human employment. Many industrial enterprises, which seek to automate certain jobs using intelligent techniques, are stepping up

people's efforts to reduce the workforce. This also gives people a bad impression of artificial intelligence.

Conclusion

Artificial intelligence continues to transform education in the form of the following processes:

- in the process of globalization and scientific and technological progress, the importance of artificial intelligence in the education system is growing;
- new dimensions and criteria can be created for students and swimmers using artificial intelligence through testing and assessment systems;
- more effective and widespread use of differentiated and individualized education has been created;
- feedback, which plays a very important role in education, can be automated to meet the needs of students with artificial intelligence.

There is an opportunity to change any industry through artificial intelligence technology, but the possibilities are not limitless.

The main disadvantages of artificial intelligence are that

- any inaccuracies in the data - affect the result;
- the accuracy of the entered data ensures the error-free operation of artificial intelligence systems;
- a system of artificial intelligence created for one industry does not work for another.

This means that a system designed for agriculture cannot be used in medicine. Either the system designed to detect fraud cannot control the car or provide legal assistance. In other words, these systems are characterized by a very narrow specialization.

Systems are designed to perform a single thematic task, and they are far from multi-tasking like humans. Furthermore, self-study systems are not independent. The descriptions of artificial intelligence technology that we have built on television and movie screens are still elements of fantasy. However, computers that can analyze complex data to learn and improve certain skills are rare.

We must not forget that every technology that is created must always serve humanity, improve its living standards, human development.

References

1. Гуломов С.С. ва бошқалар. Ахборот тизимлари ва технологиялари. Олий ўқув юрти талабалари учун дарслик. – Т.: «Шарқ», 2000 й. 336-368 б.
3. Кадиров М.М. Ахборот технологиялари. Ўқув қўлланма. 1-қисм. - Т.: «Сано-стандарт» нашриёти, - 2018. 192-237 б.
4. Брусиловский П.Л. Интеллектуальные обучающие системы // Информатика. Научно-технический сборник. – Киев: 1990. № 2.
5. Бессмертный И.А. Искусственный интеллект. Учебное пособие. - Санкт-Петербург: 2010. 27-32 с.
6. Болл Ф. «Материалы будущего» в книге «Нанонаука и нанотехнологии» Энциклопедия систем и жизнеобеспечения. Сборник. - М.: Техносфера, 2009. - 91 с.

