

Artificial Intelligence: An Important Factor In The Development Of Modern Society

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Article History	Abstract
Received: 20 th April, 2026 Accepted: 14 th May 2026	This article examines the role of artificial intelligence as one of the key factors in the development of modern society. The study analyzes the impact of artificial intelligence technologies on various fields, including education, economics, healthcare, industry, and information systems. The opportunities created by intelligent systems in increasing labor productivity, accelerating digital transformation, and improving the quality of life are highlighted. At the same time, the article discusses important issues related to the ethical, social, and security aspects of artificial intelligence. The research emphasizes that the effective and responsible use of artificial intelligence technologies serves as an important foundation for sustainable development and innovation in society.
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The 21st century occupies a special place in the history of mankind as the century of information technologies. In particular, the development of artificial intelligence technologies is deeply penetrating all spheres of social life. Today, artificial intelligence is widely used not only in programming or technical areas, but also in medicine, education, economics, agriculture, transport, banking and everyday life. Although the idea of creating systems close to human thinking has interested scientists for many years, it is the development of modern computer technologies that has opened up great opportunities in this area.

The concept of artificial intelligence is interpreted differently in many scientific sources. In a general sense, artificial intelligence is the ability of computer systems to perform tasks inherent in human mental activity. This includes the ability to analyze problems, study data, make decisions, understand language, recognize speech and process images. Today, artificial intelligence is an important tool for facilitating human labor, automating complex processes and increasing efficiency.

In addition, the development of artificial intelligence technologies brings new opportunities to humanity, as well as some problems. In particular, information security, personal data protection, job loss, and ethical issues remain topical issues. Therefore, the study of artificial intelligence and its rational use is one of the main tasks of modern society.

The term artificial intelligence was first introduced into scientific circulation in 1956 by the American scientist John McCarthy. He defined artificial intelligence as “the science and technology of creating intelligent machines.” Since that time, scientists have been conducting research on modeling human thinking using computers [2].

In the early years, artificial intelligence was mainly limited to solving mathematical problems and performing simple logical operations. Due to the low capabilities of computer technology, research in this area developed slowly. However, in the late 20th and early 21st centuries, the increase in computer power, the widespread use of the Internet, and the formation of large-scale databases gave a strong impetus to the development of artificial intelligence.

Today, there are several main areas of artificial intelligence. These include machine learning, neural networks, natural language processing, robotics, and expert systems. In particular, machine learning technologies have enabled computers to independently analyze data and learn from experience.

The first type is narrow artificial intelligence. These systems are designed to perform only a specific task. For example, voice assistants, translation programs, or facial recognition systems are examples of narrow artificial intelligence. Most of the technologies that are widely used today belong to this type.

The second type is general artificial intelligence. Such systems should have the ability to solve various problems, think independently, and learn like humans.

Although such artificial intelligence has not yet been fully created, scientists are conducting research in this area.

The third type is superintelligence. This is a theoretical concept and refers to intelligence that is much higher than human intelligence. Some scientists emphasize that such systems may appear in the future, while others draw attention to the dangerous aspects of this.

The education system is one of the areas that is most actively using artificial intelligence technologies. Modern electronic platforms, distance learning systems and smart programs are helping to improve the quality of the educational process. Programs based on artificial intelligence analyze the level of knowledge of students and help develop individual educational programs. Since the abilities and level of mastery of each student are different, artificial intelligence is an important tool in ensuring an individual approach.

In addition, artificial intelligence is creating great opportunities in the process of language learning. Translation programs, virtual teachers and voice assistants are being used as effective tools in learning foreign languages. Students are gaining the opportunity to acquire knowledge independently.

On distance learning platforms, artificial intelligence monitors the activities of users and provides them with appropriate recommendations. This increases the efficiency of the educational process.

The use of artificial intelligence in medicine is creating great opportunities for maintaining human health and diagnosing diseases. Modern diagnostic systems analyze X-rays, MRIs, and other medical images, allowing for early detection of diseases.

With the help of artificial intelligence, the accuracy of diagnosing cancer, heart disease, and other dangerous diseases is significantly increasing. Computer systems are able to analyze large volumes of medical data in a short time.

In addition, robotic surgeries are also being developed based on artificial intelligence technologies. Surgical robots help to perform operations with high precision.

Artificial intelligence is also widely used in the economy and business sector. Banking systems, e-commerce platforms, and marketing services are increasing their efficiency with the help of these technologies. In banks, artificial intelligence is used to analyze customer data, detect fraud, and create automated service systems. Chatbots allow customers to be served around the clock.

E-commerce platforms study the interests of users and recommend products that are suitable for them. This helps to increase sales. In the marketing sector, artificial intelligence is used as an important tool in analyzing advertising effectiveness and studying consumer behavior.

Today, artificial intelligence has become an integral part of our daily lives. Voice assistants on smartphones, recommendation systems on social networks, and smart home technologies are clear examples of this.

One of the main advantages of artificial intelligence is speed and accuracy. Computer systems are able to process large amounts of data in a short time. The second advantage is to facilitate human labor. By automating complex and repetitive tasks, human time can be saved. The third advantage is to increase efficiency. In production and service processes, artificial intelligence reduces costs and increases efficiency. Artificial intelligence also allows you to replace humans in dangerous jobs and ensure safety.

Along with the development of artificial intelligence, some problems are also emerging. One of the main problems is the reduction of jobs. As a result of the automation of many simple professions, some people may lose their jobs.

The second problem is the issue of information security and personal data protection. Artificial intelligence systems collect and process large amounts of data. This increases the risk of illegal use of data.

Also, one of the problems is the possibility of artificial intelligence making incorrect decisions. If the system operates on the basis of incorrect information, errors may occur.

Uzbekistan is also paying great attention to the development of artificial intelligence technologies. Developing the digital economy, improving e-government systems, and supporting the IT sector are among the important directions of state policy. In order to train specialists in artificial intelligence in the country, new directions are being opened in higher educational institutions. IT parks and technology centers are creating opportunities for young people to engage in innovative projects. In the future, an increase in the number of artificial intelligence-based startups and expansion of international cooperation are expected in Uzbekistan [5].

In conclusion, artificial intelligence is one of the important factors in the development of modern society. This technology is creating great opportunities in education, medicine, economy, industry, and everyday life. Artificial

intelligence is emerging as an important tool for facilitating human labor, increasing efficiency, and solving complex problems.

At the same time, one should not forget about the problems associated with the development of artificial intelligence. Information security, job losses, and ethical issues require the wise management of these technologies. In the future, artificial intelligence technologies are expected to further improve and take human life to a new level. What is important is the effective and safe use of these technologies for the benefit of humanity.

Reference

1. Brynjolfsson E., McAfee A. The Turing Trap: The Promise and Peril of Human-Like Artificial Intelligence. — New York : W.W. Norton & Company, 2022. — 320 p.
2. Lee K.-F. AI 2041: Ten Visions for Our Future / Kai-Fu Lee, Chen Qiufan. — New York: Currency, 2021. — 480 p.
3. Mitchell M. Artificial Intelligence: A Guide for Thinking Humans. — London : Penguin Books, 2021. — 336 p.
4. Wooldridge M. The Road to Conscious Machines: The Story of AI. — London : Pelican Books, 2021. — 432 p.
5. Tegmark M. Life 3.0: Being Human in the Age of Artificial Intelligence. — New York : Vintage Books, 2021. — 384 p.