# ADVANCED FOREIGN EXPERIENCE IN THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

https://doi.org/10.24412/2181-1784-2025-24-47-54

**Vakhab Kuchkarov,**
professor of the Department
of Philosophy at the TSUE,
doctor of philosophy in political sciences

## ABSTRACT

*This article analyzes the essence of artificial intelligence and views related to this topic. In particular, we have studied the advanced foreign experience in the development of this process, as well as the work done in our country. Aspects related to the development of artificial intelligence and the legal basis for its implementation have found their expression in the experience of the USA, China, Japan and some European countries within the framework of this topic.*

***Key words**: artificial intelligence, computer, computer science, USA, China, Japan, European countries, foreign experience*

# SUN'IY INTELLEKTNI RIVOJLANTIRISH BO'YICHA ILG'OR XORIJ TAJRIBASI

## ANNOTATSIYA

*Ushbu maqolada sun'iy intellektning mohiyati va ushbu mavzu bilan bog'liq qarashlar tahlil qilinadi. Xususan, ushbu jarayonni rivojlantirish bo'yicha ilg'or xorijiy tajribani, shuningdek, mamlakatimizda amalga oshirilayotgan ishlarni o'rganib chiqilgan. Sun'iy intellektni rivojlantirish va uni amalga oshirishning huquqiy asoslari bilan bog'liq jihatlar hamda ushbu mavzu doirasida AQSh, Xitoy, Yaponiya va ba'zi Evropa mamlakatlari tajribasida o'z ifodasini topdi.*

***Kalit so'zlar:** sun'iy intellekt, kompyuter, informatika, AQSh, Xitoy, Yaponiya, Evropa mamlakatlari, xorijiy tajriba*

Artificial intelligence, which is widespread in the world today at a high rate, is not only theoretically important, but also important in our practical lives. As you know, artificial intelligence makes a valuable contribution to making life easier for humans and society and ensuring sustainable development, while simultaneously ensuring a higher level of functioning of processes. A number of works in this direction are being carried out in our country. The President of Uzbekistan signed a

decree "On measures to create conditions for accelerated implementation of artificial intelligence technologies" in 2021. The document provides for the creation of a local ecosystem and prerequisites for developers in the field of artificial intelligence, legal regulation of the industry and other issues.

In August 2024, the head of state instructed those responsible to create an Artificial Intelligence Technology Center. The President set the task to develop a strategy for the introduction of artificial intelligence and a two-year program of projects. In October of the same year, the presidential decree "On approval of the Strategy for the Development of Artificial Intelligence Technologies until 2030" was adopted [1].

Naturally, the use of its broad capabilities in ensuring sustainable development contributes to the further diversity of socio-economic, material and spiritual life. Therefore, moreover, on the one hand, ensuring the pragmatic service of the industry to the practical development of the socio-economic, cultural and spiritual sphere, then, on the other hand, the development of this sphere based on advanced foreign experience, which has become an important factor today, is of urgent importance.

It should be noted that artificial intelligence is "a branch of computer science that develops algorithms that can demonstrate intellectual abilities such as image recognition and recognition, natural language understanding, decision making, and problem solving through analysis"[2]. Artificial intelligence is the field of creating computers that are as intelligent as humans. The first work in this field was carried out in 1956 by J. P. Blavatsky and McCarthy. "Artificial Intelligence (AI) research was officially launched in 1956, when it was presented and put into practice at a small but now popular DARPA-sponsored summer conference at Dartmouth College in Hanover, New Hampshire"[3]. Another given definition states: "Artificial intelligence as a scientific field expressing knowledge, thinking and tasks; epistemological completeness of knowledge expression and heuristically effective strategies for finding solutions to problems; models of knowledge expression: algorithmic, logical, network and production models, scenarios; expert systems: classification and structure; instrumental design and development; stages of development; implementation of examples" [4].

Consequently, artificial intelligence systems, through input, collect data using sensors and sensors and organize them, using this information to create intelligent responses. It forms new knowledge by combining different information. Some aspects of the thought process, such as studying problems, analyzing, and providing various solutions, are switched to offline mode using software

algorithms. His early activity is to study various systems through external or internal resources in order to form appropriate behaviors or reactions.

Many countries around the world have accumulated extensive experience in artificial intelligence and its development and implementation. The role of higher education institutions in the development of this field is increasing from year to year. The People's Republic of China is currently the leader among higher education institutions and research institutes in the world [5]. Of the 295 leading higher education institutions and research institutes in the World Intellectual Property Organization's 2019 report, the top 10 belong to the state of China. It is followed by Korea, the USA, Japan and European countries. Based on an analysis conducted by Accenture, an Irish company that provides consulting services in the field of strategic design, digital information technology and many other areas in more than 120 countries around the world, the G20 showed that the growth rate of artificial intelligence in these countries (USA, UK, Germany, France, Japan and the Republic of Korea) may increase in 2 times by 2035. It certainly recognizes that artificial intelligence is one of the main tools of economic development and improvement of public administration for these countries [6]. It is known that to date, 7 international cooperation agreements and more than 50 national strategies for the development of artificial intelligence have been adopted on the world stage [7]. Oxford Insights I International Research and Development Center has published an Index of readiness of various countries for the use of artificial intelligence technologies [8]. The experts assessed the outcome based on various criteria, such as: • quality of management; • innovation potential; • human capital; • infrastructure; • data availability; • representativeness of the data; • quality of accountability; • "transparency" I Dr. Thus, we have compiled a list of the most developed countries and are ready for the full implementation of technological artificial intelligence in various spheres of government and society: 11. The United States of America. 22. Great Britain. 33. Finland. 44. Germany. 55. Sweden. 66. Singapore. 77. The Republic of Korea. 88. Denmark. 99. The Netherlands. 1010 Norway. The United States of America ranks first in the index published in 2020.

Most of the remaining places in the top ten are occupied by European countries, reflecting the fact that North America and Europe are falling in love with regions with genuinely high rates in general. The United States is known for its innovation in the private sector, and "silicon Valley" is synonymous with cutting-edge technology. Meanwhile, although there are no technology centers in ether Europe on a par with the United States, there is a high concentration of national II strategies in Western Europe, supported by the European Union's regional strategy outlined in the ego White Paper "Artificial Intelligence — a

European Approach to Excellence and Trust" [9], published this year. Thus, the European Union supports a regulatory and investment-oriented approach to implement cooperations II and eliminate the risks associated with certain uses of this new technology [10]. In general, artificial intelligence can be described as a set of technological algorithms and quantitative motor skills [11]. Thus, advances in quantitative technology and the increasing availability of data are key factors in modern development. Europe strives to combine its technological and industrial advantages with high-quality digital infrastructure and a regulatory framework based on its fundamental values. All this makes it a global leader in economics and innovation. China, which has got ambitions to challenge the United States for global leadership in the field of artificial intelligence, ranks surprisingly low in the index — 19th. Russia is in 33rd place in this list.

As for education, innovations in the field of digital education will help to use dates I technology, dates to II more effectively. Among these, you can see training and predictive analytics. The main goal pursued by the governments of different countries is to improve the education and training system and bring IT in line with the digital age. It is important that it will raise awareness of II neither at all levels of education, which will prepare citizens to make informed decisions, nor that II will have an increasing impact.

More specifically, among the foreign practical applications of artificial intelligence, the most interesting and in-demand are [12]:

• "smart assistants" (Great Britain), which provide a solution to student requests according to a typical scenario;

• recommendations for student selection (SSHA) [13]. These are forecasting areas of scientific interests and academic performance based on the student's portfolio;

• recommendations on measures to support researchers (Germany), forming proposals for sending applications for support measures based on nauchnix interesov;

• chatbot (resp. Korea). It can be described as an "entry point" to the "electronic dean's office" through which a student can send a request;

• proactive interaction (the Netherlands), which is a predestination of difficulties that may arise in the learning process, and the use of coping mechanisms;

• proctoring (Singapore). It is a system for monitoring and verifying students in cases of online certification. Among the most relevant trends in the development of the II V branch of science and I higher education are the following [14]: *1. Individualization and personalization*. As a rule, it is a selection of courses in

accordance with the student's scientific interests [15]. It is also important to adapt the teaching methods to the needs of the student. A positive emphasis is placed on developing new approaches to the study of disciplines based on a retrospective analysis of dannix using technology II.

*2. The platform approach*. This trend includes the formation of a platform for digital online courses for students and the formation of recommendations for studying courses in accordance with scientific interests. To achieve this approach, it will be important to form a single platform for scientific collaborations of researchers with the functionality of recommendations for joint research, as well as access to support measures. Consequently, in Japan, the Strategic Council for Artificial Intelligence Technologies (dalee — Soviet) was established in April 2016 on behalf of the Prime Minister of Japan to determine the goals of research and development, as well as a roadmap for the industrialization of artificial intelligence. The Soviet Union, consisting of representatives of academia, industry, and government[16], published its Technological Strategy for Artificial Intelligence in March 20179. In accordance with this strategy, the Council acts as a supervisory body and manages five national research institutions under the jurisdiction of the Ministry of the Interior, the Ministry of Education, Culture, Sports, Science and Technology; the Ministry of Economy, Trade and Industry in order to promote research and development in the field of artificial intelligence technologies. The Council also coordinates its activities with ministries that distribute large amounts of data and impose rights (jurisdictions) in relation to industries using artificial intelligence, including the interdepartmental program for promoting strategic innovations under the Cabinet of Ministers, the Ministry of Health, Labor and Social Security, the Ministry of Land, Infrastructure, Transport and Tourism, and the Ministry of Agriculture.

Naturally,forestry and fisheries, which promotes the use and application of artificial intelligence technologies. The Council is also developing roadmaps for the industrialization of three priority areas: manufacturing; healthcare, medical care and social security; and mobility. The strategy also states that the national institution will develop infrastructure technologies, contributing to the development of qualified personnel, resources, and also limit the accessibility of startups. V August 2018, the Soviet Strategy Implementation Plan [17]. The Japanese government is currently developing a universal law for medical equipment that uses an element of artificial intelligence. The rule prescribes that doctors are primarily responsible for diagnosing a human disease, and sets a safety standard for approval by the federal government [18].

In general, compared with 2017, the number of countries that announced strategies for the development of artificial intelligence increased 8-fold by the beginning of 2020. While artificial intelligence strategies were developed in Canada, Singapore, the United Arab Emirates, Finland, Japan, and China in 2017, many other countries also made the list in 2019. In particular, the countries of Italy, Tunisia, the United Kingdom, the United States, Sweden, Mexico, the European Union, Kenya, Denmark, France, Australia, the Republic of Korea, India and Germany can be cited as examples.

Despite the fact that European countries have strategies for the development of AI, in order to consolidate existing forces and capabilities and achieve high results in the global community, on April 10, 2018, 25 European states signed a declaration on cooperation in the development of AI [19]. It aims to build Europe's capacity in the field of artificial intelligence technologies, implement AI, consistently combat socio-economic global challenges based on AI technologies in cooperation, as well as develop legal and ethical frameworks within AI and channel AI achievements into public administration. In May 2018, a Declaration on Artificial Intelligence in the Northern Baltic States was signed with the participation of 10 countries, aimed at enhancing the role and development of artificial intelligence for the development of mankind [20]. Improving knowledge, skills and abilities in order to expand the use of artificial intelligence perspectives in business and public administration; ensuring the openness of information used in AI in order to organize standard services for business and public services in the regions; developing ethical and transparent guidelines, standards and regulations defining the areas of application and norms of AI; In AI provides for the reliability, security, and security of the entire infrastructure used, including the necessary hardware and devices, software, and data.

From the above analysis, it can be seen that the overall perspective is complex and multifaceted. On the one hand, artificial intelligence and technologies based on it can significantly improve the quality of human life, develop science, and find effective solutions to global problems (for example, climate change, pandemics, and food shortages). For example, in medicine, individual treatment methods using AI are being developed, in education, individual training programs are being created that are adaptable to each student and in economics, and resource efficiency is increasing.

On the other hand, artificial intelligence also creates global risks. As a result of changes in the structure of the labor market, the risk of losing many professions, increasing social inequality, information manipulation, and algorithmic control increases. The emergence of autonomous AI-based weapons, especially in the

military sphere, can provoke a massive danger to humanity. In addition, cognitive and ethical issues: for example, the possibility that artificial agents act contrary to human values in decision-making is also controversial on a global level. In this sense, the question of the relationship between humanity and artificial intelligence is no longer a purely technical problem, but raises deep philosophical and existential questions:

* What is the role and mission of humans in the world of artificial intelligence?
* Can humanity maintain control over its invention?
* How do human values such as morality, reason, and freedom align with AI?

Naturally, in the future there is a possibility of the emergence of new civilizational forms based on the cooperation of humans and artificial intelligence. In this hybrid future, human intelligence and machine intelligence can complement each other, and AI can serve as a tool for human empowerment. For example, according to the concept of "cognitive argumentation", human thinking, decision-making, and creativity are significantly enhanced by using AI.

However, this optimistic scenario can only be realized if certain conditions are met:

First, it is necessary to develop global ethical and legal norms in the creation and application of artificial intelligence.

Secondly, humanity should strive to preserve its biological and spiritual essence, understanding technological development as a means, not as an end.

Third, the social distribution of technology in society must be fair and inclusive.By the end of the 21st century, humanity may face two main paths.:

1. The path of technological progress and humane harmony, in which Xi acts as the successor and helper of the human mind;

2. The path of loss of control and dehumanization, in which technology can threaten human values and existence.

Therefore, the main task facing humanity today is to teach artificial intelligence to serve the long—term interests of humanity, to manage science and technology within the framework of ethics and consciousness.

**REFERENCES**

1. Shavkat Mirziyoev sun'iy intellektdan foydalanish etikasi bo'yicha model qonun ishlab chiqishni taklif qildi. https://daryo.uz/k/2025/04/07/shavkat-mirziyoyev-suniy-intellektdan-foydalanish-etikasi-boyicha-model-qonun-ishlab-chiqishni-taklif-qildi.
2. Rassel Styuart, Norvig Piter. Iskusstvenniy intellekt: sovremenniy podxod, 2 -e izd.. : Per. s angl. M. :Izdatelskiy dom"vilyams", 2007. 1408 s.

3. The Stanford Encyclopedia of Philosophy. The Metaphysics Research Lab, Department of Philosophy, Stanford University. Library of Congress Catalog Data: ISSN 1095-5054. 2022.
4. Filippovich Yu.N., Filippovich A.Yu. Sistemi iskusstvennogo intellekta.. — M.: MGUP, 2009. — 302 s.
5. WIPO (2019). WIPO Technology Trends 2019: Artificial Intelligence. Geneva: World Intellectual Property Organization.
6. AI research how AI boosts industry profits and innovation.
7. HolonIQ and source government strategy and policy papers.
8. Oxford Insights, "Government Artificial Intelligence Readiness Index", 2020.
9. White Paper on Artificial Intelligence — A European approach to excellence and trust
10. Kolesnikova G.I. Iskusstvennyi intellekt: problemy i perspektivy //videonauka. — 2018. — №. 2 (10).
11. Yunusov A.R., Abubakarov SH. M. Iskusstvennyi intellekt // VSEROSSIISKAYA NAUCHNO-PRAKTICHESKAYA KONFERENTSIYA STUDENTOV, MOLODYKH UCHENYKH I ASPIRANTOV" NAUKA I MOLODEZH"'. — 2018. — S. 47-49.
12. Pyrnova O.A., Zaripova R.S. Tekhnologii iskusstvennogo intellekta v obrazovanii //Russian Journal of Education and Psychology. -2019. — T. 10. — №. 3. — S. 41-44.
13. Beck J., Stern M., Haugsjaa E. Applications of AI in Education //XRDS: Crossroads, The ACM Magazine for Students. — 1996. —T. 3. — №. 1. — S. 11-15.
14. Zaripova R.S. Global'nye trendy sovremennogo obrazovaniya//NovaUm. Ru. 2018. No 13. S. 232-234.
15. URL: http://www8.cao.go.jp/cstp/tyousakai/jinkochino/.
16. URL: https://www.nedo.go.jp/content/100865202.pdf.
17. URL: http://www8.cao.go.jp/cstp/tyousakai/jinkochino/keikaku.pdf.
18. Government, Comprehensive Rule for AI Healthcare, Prescribe."Medical Doctor Ultimately Responsible"//URL: 20.https://www.nikkei.com/article/DGXMZO32207330V20C18A6MM8000/.