

THE SIGNIFICANCE OF ARTIFICIAL INTELLIGENCE IN COMPETITIVENESS

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Abstract. This article examines the history of artificial intelligence, its development, its impact on industrial and social spheres, ways to achieve efficiency, and its significance for competitiveness.

Keywords: artificial intelligence, technology, service, social services, digital economy, information and communications technology, employment, economic growth, competition.

Artificial intelligence is becoming one of the decisive factors in ensuring competitiveness in the modern economy. If we look at the development of science from the historical point of view, research in the field of artificial intelligence began in the middle of the last century. English mathematician and cryptographer Alan Turing lived in 1912-1954 and is considered the author of the first research in this direction. In particular, in 1950, an article was published, based on questions about the capabilities of technology, which left humans behind in terms of intelligence, and its author was Alan Turing. Later, the scientist developed the procedure for the "Turing test", which is named after him. After the publication of the article, new research was carried out in the field of artificial intelligence. During this period, the scientist, without changing his views, also began to express various opinions about machines that would not differ from humans in thinking. In today's conditions of rapid development of science and information and communication technologies, in the developed countries of the world, it is customary to widely use modern information technologies and artificial intelligence capabilities in state and community management, economy, industry, social protection, education, medicine, employment, agriculture, defense, security, tourism and other fields.

The term "artificial intelligence" appeared in 1956. In the summer of that year, a conference on artificial intelligence was held at Dartmouth University in the United States. It was attended by scientists such as Claude Shannon (Bell Laboratories), Nathaniel Rochester (IBM), Herbert Simon (Carnegie University), Trenchard Moore (Princeton University), John McCarthy (Dartmouth University), and Marvin Minsky (Harvard University). The American computer scientist John McCarthy (1927-2011), who gave a speech at this conference, went down in history as the author of the term "Artificial Intelligence". John McCarthy is an American computer scientist and mathematician who is considered the first scientist to use the term "Artificial Intelligence". He first used the term in his famous research project in 1955.[4]

S.S. Gulomov has conducted research on models of digitizing the education system and providing students with digital competencies. Their main goal is to combine the theoretical and practical aspects of digitizing the economy and provide recommendations for national strategies, statistical systems, and educational programs. [3]

In the 1980s, artificial intelligence began to be recognized as a discovery. Scientists began to develop textbooks in this direction. Also, in 1997, the famous chess program "Deep Blue" was created, which defeated the world chess champion Garry Kasparov. In those years, a 6th generation computer project based on neural networks was being developed in Japan. After that, attention to artificial intelligence increased. From large companies to military institutions, they began to finance this area. As a result, the number of new technologies increased, competition intensified, and artificial intelligence tools became more perfect. When most people think of



“artificial intelligence,” they think of robots being used in various fields. However, the term artificial intelligence does not mean that robots will replace humans. Its main goal is to expand the boundaries of human capabilities and capabilities. That is why such technologies are a valuable business resource.

Previously, the term "artificial intelligence" was used to refer only to tasks that humans could perform, such as customer service or playing chess. Deep learning of computer technologies was also considered artificial intelligence. However, customer service, various online games, and deep learning of computer technologies are only a small part of artificial intelligence technologies. It's true that artificial intelligence technologies help increase efficiency by automating tasks that humans perform. But now its scope is expanding, and now it can be used to determine people's character, students' abilities, and employees' attitudes towards work.

The information system "Single Register of Social Protection", provided for in the Resolution of the President of the Republic of Uzbekistan "On Additional Measures to Automate the Procedures for Providing State Social Services and Assistance to the Population", also requires the effective use of modern technologies, including artificial intelligence. It is known that now the rules of procedure for reviewing and assigning social benefits applications are implemented through the "single register". As a component of the "Electronic Government" system, the "Unified Register of Social Protection" functions as an inter-agency integration platform, and the database provided by the relevant agencies can be maintained through artificial intelligence technology.

The Address of President Shavkat Mirziyoyev to the Oliy Majlis on priority tasks for the main results in 2020 indicated the launch of the "Social Register" starting in 2021, the creation of the possibility of providing more than 30 social services to needy families electronically, and the integration of the new system with the "Iron Notebooks", which were implemented in practice.[2]

The widespread introduction of new technologies, namely artificial intelligence, into social protection programs and other areas in Uzbekistan will stimulate the use of modern information technologies in the public and private sectors, increase the country's opportunities for developing a digital economy and introducing innovations into every sector. At the same time, it will lead to the effective use of modern scientific achievements. Uzbekistan has also set a priority task of becoming one of the leading countries in innovative development by 2030 through the development of informatization and the digital economy. It should be noted that in the "Year of Development of Science, Enlightenment and Digital Economy" significant changes in information technologies and digitization were implemented and a number of important programs were adopted.

In particular, the resolutions of the President of the Republic of Uzbekistan “On measures for the widespread introduction of the digital economy and electronic government” and “On additional measures to automate the procedures for providing state social services and assistance to the population” and other regulatory legal acts are aimed at accelerating digitization in our country and introducing modern technologies into socio-economic sectors. In addition, in 2020, significant work was carried out on material support for social protection of the population and the introduction of ICT into the system. In particular, a new system for working with needy families, women and youth, such as "Iron Notebook", "Women's Notebook", "Youth Notebook", has been introduced. Within the framework of the nationwide movement "Generosity and Support", more than 800 thousand needy families were provided with more than 1 trillion soums in financial assistance. In addition, one-time assistance payments of 500 thousand soums were paid to each of the children under the age of 16 of needy families included in the "Iron Notebook", and to more than 845 thousand children under the age of 16 of families receiving disability and survivor pensions or benefits, totaling 422 billion soums. The number of social



welfare recipients has doubled, reaching 1.2 million people. At the same time, in recent years, as a result of measures to introduce informatization and advanced technologies in various fields, a unique potential foundation has been created in Uzbekistan in the field of ICT and artificial intelligence [3]. In this regard, the activities of the Ministry of Innovative Development and organizations under the ministry, scientific research centers on ICT, higher education institutions and their talented graduates, as well as technoparks, and a number of organizations in the private sector can be particularly recognized. Also, in the field of artificial intelligence and modern information technologies, the “Smart School” program has been introduced in schools in the city of Fergana, the “Monterra” online platform for assessing the condition of arable land in the Andijan region, the “Smart City” project is planned to be implemented in the city of Nurafshon in the Tashkent region, and the “Safe City” and “Digital Tashkent” projects are planned to be implemented in Tashkent. As is known, modern artificial intelligence consists of algorithms and software systems designed to perform various actions, performing a number of tasks that the human mind can perform based on information entered into a database. Artificial intelligence is also considered an “intelligent” technology that includes complex analyses and programs that work with big data, and is capable of logical, consistent reasoning and making recommendations. Experts see artificial intelligence as the foundation of the fourth industrial revolution. According to experts, the basis of social protection for the population is social assistance, social insurance, and employment-related programs.

In developed countries, the use of opportunities of artificial intelligence and modern information technologies in the social sphere, in particular, in healthcare, education, employment, social protection and other areas, is becoming widespread. The following projects can be considered from successful foreign experiences in the field of social protection of the population in developing countries. For example, the Harambee project implemented in South Africa is aimed at helping to ensure social youth employment. This program uses artificial intelligence to determine professional and qualification compatibility, form a database of job seekers and offer them suitable vacancies based on various criteria. In a short period of time, Harambee has provided employment to young people, mainly in the private and informal sectors.

Artificial intelligence is a set of technologies that automate some functions of the human mind (analysis, learning, decision-making, forecasting, etc.). Its impact on the economy has grown significantly in recent years, and countries around the world are embracing artificial intelligence as a new driver of economic growth. The main areas of impact of artificial intelligence on the economy are, first of all, increasing production efficiency through artificial intelligence, optimizing production processes, reducing errors in the production of robotic systems, and saving energy, raw materials, and time. When this situation was applied in Siemens and General Electric, it was proven that artificial intelligence, by detecting equipment malfunctions in advance, increased production efficiency by 20-30%.

Changes in the labor market are also having a positive impact, as automation, while reducing some jobs, creates new, highly skilled professions. For example, such professions as data analysts, artificial intelligence specialists, and robotics engineers are among them. This, in turn, requires retraining and improving the quality of education in the labor market.

Also, if we think about the impact on the finance and banking system, artificial intelligence automates banking services, i.e. it is used in processes such as chatbots and automatic credit scoring systems. It detects fraud cases and reduces financial risks by predicting investment decisions. In the field of transport and logistics, artificial intelligence can be used to manage traffic, optimize logistics routes, and control autonomous vehicles. This increases the speed of goods turnover and reduces transportation costs. When artificial intelligence is applied in agriculture, “smart farming” systems save water, fertilizer, and energy. It shows its results in the



automation of crop forecasting, soil moisture, and pest monitoring through drones and sensors. When applied in public administration and the service sector, artificial intelligence accelerates data analysis in decision-making in public administration. At the same time, it improves the quality of services in the fields of taxation, statistics, healthcare, and education. Today, this is the case in Estonia, where 99% of public services are provided online through the artificial intelligence-based “e-Estonia” system.

According to PwC estimates, global GDP will increase by \$15.7 trillion by 2030, with artificial intelligence as a driver of economic growth. 45% of this will be due to productivity gains and 55% to new products and services.[1]

Today, there are also problematic and dangerous aspects of artificial intelligence, including:

- the risk of unemployment in the labor market;
- information security and privacy issues;
- discrimination or wrong decision-making through algorithms;
- digital inequality - the widening technological gap between developed and developing countries.

Competitiveness is the ability of an enterprise, industry or country to effectively participate in the market, produce high-quality products and introduce innovations. The main importance of artificial intelligence in competitiveness is, first of all, increasing production efficiency. In this case, artificial intelligence reduces the human factor, reduces production costs, stabilizes product quality. This gives enterprises a competitive advantage. It also improves the quality of decision-making by analyzing large amounts of data, identifying market trends, predicting risks and proposing optimal strategies. This is done through Big Data Analytics.

Artificial intelligence also makes a significant contribution to accelerating innovative development, enhancing processes such as creating new products, improving the quality of services, and accelerating digital transformation.

The impact of artificial intelligence on the economy in Uzbekistan can be explained by the adoption of the “Concept for the Development of Artificial Intelligence” in 2021. The task of introducing artificial intelligence in various sectors of the economy by 2030 is set. Artificial intelligence solutions are being tested in the fields of public services, transport, agriculture and education. The main goal for the future is to increase the share of the digital economy and create a new driver for GDP growth.[5]

In conclusion, if we think from the above, artificial intelligence will have a double effect on the economy: positively, it will accelerate efficiency, innovation and economic growth, and negatively, it will cause changes in the labor market and information security problems. Based on this, it is important for countries to maintain a policy of social and economic balance in the introduction of artificial intelligence.

So, in conclusion, in order to expand the use of artificial intelligence technologies, to improve the system of digital data collection, storage and processing, a number of works are currently being carried out in our country to train qualified personnel in this field, to support scientific projects in this direction. In turn, the introduction of artificial intelligence into science requires an increase in the number of qualified personnel. Artificial intelligence is a strategic resource of a competitive economy. It not only increases efficiency, but is the main driver in forming an innovative economy, taking a worthy place in the global market and ensuring sustainable development.

LIST OF REFERENCES USED



1. Decree of the President of the Republic of Uzbekistan No. UF-6079 dated October 5, 2020 "On approval of the "Digital Uzbekistan – 2030" strategy and measures for its effective implementation" // www.lex.uz
2. Speech by the President of the Republic of Uzbekistan Sh.M. Mirziyoyev at the event dedicated to the development of information technologies on February 13, 2020 // www.lex.uz
3. Gulyamov S.S. and others. Blockchain technologies in the digital economy. - T.: "Economy-Finance", 2019
4. John McCarthy. "A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence" 1955.
5. "Digital Uzbekistan – 2030" strategy // www.lex.uz

