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THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE DIGITAL ECONOMY

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Abstract
The article explores the possibilities of applying artificial intelligence technologies to improve the tasks of the digital economy. Artificial intelligence (AI) has enormous potential for the digital economy, offering wide opportunities to optimize business processes, increase efficiency and create new innovations. AI can automate routine tasks, process large amounts of data, predict decisions, and improve customer interactions. According to the results of a study by UZINFOCOM, a leading information technology company in Uzbekistan, artificial intelligence systems increase the efficiency of detecting financial fraud in financial institutions and banks by 50%. The introduction of artificial intelligence in Uzbekistan shows a widespread global change in which countries increasingly recognize the potential of AI to improve economic development, enhance public services and solve social problems.[1]

Keywords: Artificial intelligence, digital economy, decision making, data analysis, optimization, economic efficiency, infrastructure, digital transformation

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1. Introduction

The use of Artificial Intelligence in the digital economy can radically change the traditional foundations that have taken root in human consciousness. The digital economy has been gaining great progressive momentum in recent years in all sectors of the economy as a whole, and has also become the main driver of the technological revolution. Artificial intelligence is becoming the main direction of the digital economy.

Artificial intelligence technologies play a decisive role in the digital economy and provide a wide impact: from optimizing business processes to creating new innovations. In this article, we dwell on the role of artificial intelligence in the digital economy, its advantages, prospects and problems in the future.

Artificial intelligence is a reserve part of the digital economy, which helps to make processes more efficient and individualized.[2]

However, challenges associated with the development of artificial intelligence technologies and their widespread adoption must be taken into account. The positive impact of artificial intelligence technologies can be maximized by addressing data privacy, security, technology dependencies, and ethical concerns.

The future digital economy is closely linked to how artificial intelligence will overcome these challenges and create new opportunities. The development of artificial intelligence in Uzbekistan is a prerequisite for digital transformation and technological development. Although challenges remain, countries' commitment to developing artificial intelligence in various fields offers promising opportunities for economic growth, improved public services, and improved quality of life.

The main technological trends in the development of the digital economy of Uzbekistan are played by various institutions, including government agencies, educational institutions and private companies. These institutions include:

1. Government agencies:

- Ministry for the Development of Information Technologies and Communications
- State Committee for the Development of Information Technologies and Communications

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- State Committee for the Development of the Digital Economy and Electronic Services

2. Educational institutions:

- Tashkent University of Information Technologies named after Muhammad al-Khwarizmi
- University of Digital Economy and Agrotechnology (UDEA)
- Inha University in Tashkent (UITS)

Private companies and organizations

- IT Park of Uzbekistan
- IT Academy of IT Park
- Various technology startups and companies engaged in the development of digital products and services

In turn, AI in the digital economy will affect the issue of jobs in the global labor market.

The staff of the specialized agency IMF (International Monetary Fund) are studying the potential impact of AI on the global labor market, shown in the figure below (Figure 1). Many studies predict the likelihood that jobs will be replaced by AI. However, we know that in many cases, AI is likely to complement the work performed by people. The IMF analysis reflects both of these aspects [3].

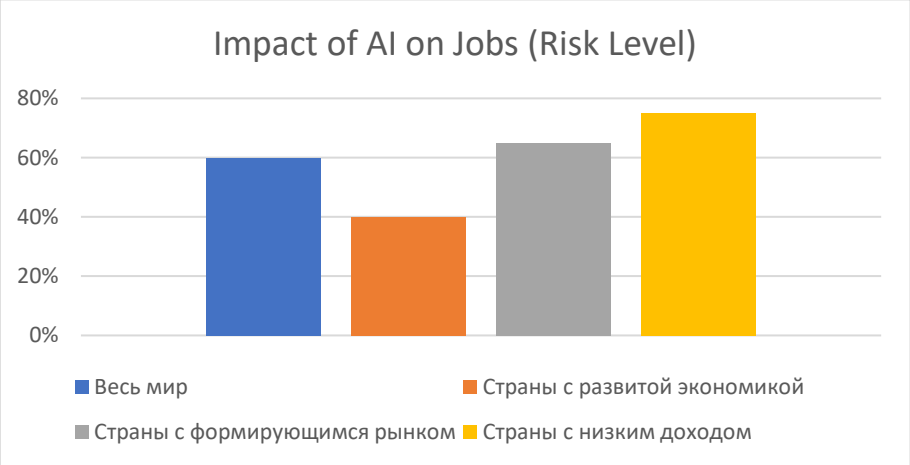

Figure 1. The Impact of AI on Jobs

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2. Research Methodology

This study uses a mixed methodological approach. On the one hand, quantitative methods are used to analyze quantitative indicators, including various statistical data reflecting the development of the digital economy using AI. On the other hand, qualitative methods focus on social and cultural factors.

An important feature of the methodology for studying the prospects for using artificial intelligence in the digital economy is the need for its harmonization with national legislation and the regulatory framework. In this case, the Digital Uzbekistan - 2030 strategy, the Law on Electronic Government and other regulatory documents are taken into account [4].

3. Literature Review

Modern research in the field of digital economy is actively developing, and many scientists, practitioners and international organizations devote their work to the issues of the role of artificial intelligence in the digital economy and its impact on various aspects of economic and social life.

One of the first steps in studying the digital economy in Uzbekistan was to turn to the general concepts and definitions presented in the works of such researchers as A. Brinslov and G. McAfee, who emphasize the importance of digital technologies, and their work is also aimed at the need to develop strategies that promote the integration of digital technologies into the economy [5].

Analysis and Results

As a result of the conducted research, the following perspectives of artificial intelligence in the digital economy are used:

- **Automation and optimization of business processes:** AI can automate routine tasks such as data processing, reporting, and performance monitoring, freeing up employees for more creative and strategic tasks.

- **Customization and personalization:** AI makes it possible to analyze customer data and offer them personalized services and products, which increases customer loyalty and sales.

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- **Development of new products and services:** AI helps create new products and services, such as intelligent security systems, automated translation and speech recognition systems, allowing businesses to enter new markets and expand their customer base.

- **Improved customer interactions:** AI can be used to create chatbots and other interactive tools that allow companies to answer customer questions quickly and effectively.

- **Optimization of supply chains:** AI can be used to forecast demand, optimize logistics and manage inventory, thereby reducing costs and increasing efficiency.

- **Development of financial technologies:** AI can be used to analyze credit risks, detect fraud and optimize financial transactions.

- **Training AI and its adaptation to new conditions:** AI requires significant investment in training and development, as well as adaptation to changing market conditions.

- **Data security and protection against cyber attacks:** The use of AI may create new risks to data security and cyber attacks, so effective security measures must be implemented.

- **Regulatory and ethical issues:** There is a need to develop clear rules and regulations that would regulate the use of AI in the digital economy and ensure compliance with ethical principles.

- **The gap between developed and developing countries:** There is a risk that AI will lead to further disparity between developed and developing countries if the latter fail to adapt to new technologies.

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According to the results of the study, the main prospects for the use of AI will be obtained through the optimization of business processes and the expansion of the possibilities of automation and robotization of manual labor; restructuring of the global labor market and the transformation of educational processes in favor of personalization and the development of conceptual thinking; the elimination of subjectivity and irrationality in decision-making [6].

According to forecasts by experts from the National Research University Higher School of Economics, the volume of the artificial intelligence market (Figure 2) will increase by 150 times by 2025 compared to 2016 and reach a value of $59.7 billion

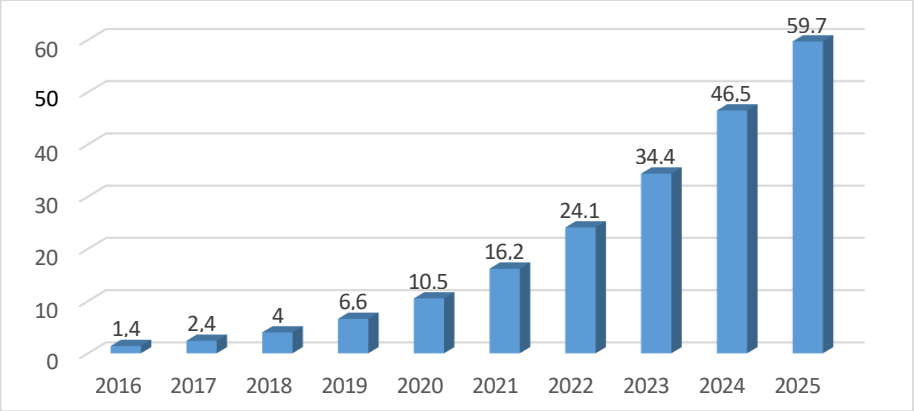

Figure 2. Artificial Intelligence Market Size, USD Billion.

Another direction of development and implementation of AI in the field of digital economy is the complementarity and expansion of human capabilities, when machines do what they do best (performing repetitive, monotonous tasks with processing colossal amounts of data), and people do what they do best (working with ambiguous information, drawing conclusions in complex cases, making decisions in conditions with a high level of uncertainty, creativity, etc.).

3. Conclusions and suggestions

As a result of the conducted study of further prospects for the use of artificial intelligence in the field of digital economy in Uzbekistan, we can conclude: The use of artificial intelligence in Uzbekistan contributes to increasing the competitiveness of all sectors of the economy, improving the quality of life of

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the population and the development of various innovations and technologies in the future. Also, the authorities of the Republic of Uzbekistan pay special attention to the training of personnel in the field of AI and the digital economy in improving the qualifications of employees [8]. Another positive feature of the use of AI is the improvement of the level of digital literacy of the population, since this factor serves as a significant challenge for the full implementation of digital technologies in our developing country.

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