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THE DEVELOPMENT TREND OF ARTIFICIAL INTELLIGENCE

Abraev Asilbek Otabek ugli,
Karshi State Technical University,
Student of the Department of Telecommunication Technologies

Annotation. *This article analyzes the development trends of artificial intelligence technologies. It discusses the development of artificial intelligence in learning and decision-making, natural language processing, automated systems and robotics, and the impact of high-level automation and the workforce. The article analyzes the current and future trends of artificial intelligence, its opportunities and risks, as well as its role in society.*

Key words: *artificial intelligence technologies, trend analysis, decision-making capabilities, natural language processing, automated systems, robotics, automation.*

Аннотация. *В статье анализируются тенденции развития технологий искусственного интеллекта. В ней обсуждается развитие искусственного интеллекта в обучении и принятии решений, обработке естественного языка, автоматизированных системах и робототехнике, а также влияние автоматизации высокого уровня на рабочую силу. В статье анализируются текущие и будущие тенденции искусственного интеллекта, его возможности и риски, а также его роль в обществе.*

Ключевые слова: *технологии искусственного интеллекта, анализ тенденций, возможности принятия решений, обработка естественного языка, автоматизированные системы, робототехника, автоматизация.*

The development of artificial intelligence technologies has advanced rapidly in recent years. Today, artificial intelligence is widely used not only in advanced fields of science and technology, but also in everyday life. The development trends of this technology are creating new opportunities and problems in society, economics,

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and politics. In this article, we will analyze the development trends of artificial intelligence and discuss its future, opportunities, and expected changes.

One of the most important trends in the development of artificial intelligence is the improvement of machine learning and decision-making processes.

Today, artificial intelligence systems are able to make effective decisions based on trained data. For example, decisions are made automatically in areas such as financial analysis, marketing strategies, and health care diagnostics. These processes help reduce uncertainty and make faster, more accurate decisions.

Developing algorithms, especially with the help of deep learning technologies, learn to solve problems based on their own experience, rather than working according to predetermined rules. This allows machines to replicate many aspects of human mental activity.

Developments in the field of natural language processing (NLP) are taking artificial intelligence to a new level. Artificial intelligence systems are developing the ability to understand and respond to natural language from humans.

New technologies learned with the help of artificial intelligence, such as voice assistants (Alexa, Siri, Google Assistant) and chatbots, are expanding the possibilities for effective communication with humans. This will allow for customer service in business, personalization of teaching methods in education, and the widespread use of interactive technologies in everyday life.

The future trend of natural language processing is for machines to understand language not only grammatically, but also semantically and contextually. This will make artificial intelligence systems more "intelligent" and allow them to detect subtleties in human language, such as intent, tone, or layers of meaning.

The integration of AI and robotics is of great importance in optimizing production processes. Automated robots work effectively in tasks such as picking, packaging, and inspecting products in factories. This helps to further accelerate production processes and increase economic efficiency.

Safety and Self-Driving Transportation: With the development of AI, self-driving transportation systems (such as self-driving cars) are also expanding. These

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technologies help prevent accidents, optimize transportation systems, and improve traffic flow.

Another trend in the development of artificial intelligence is the impact of high-level automation on the workforce.

With the development of artificial intelligence, many jobs will be automated, especially repetitive and dangerous tasks. This will create new jobs in areas that require new skills, but at the same time, certain professions may disappear. Therefore, issues of social security and vocational education will be important.

All workers will face the need to learn and adapt to new technologies. In the future, training in the use of automation and artificial intelligence systems will become a key part of training programs.

AI systems can lead to uncertainty and bias in decision-making if they are trained on inaccurate or biased data. This can pose challenges, particularly in the areas of justice, equity, and human rights.

The widespread use of AI systems raises privacy and security concerns. AI systems require caution in the collection, analysis, and storage of data, as misuse can lead to data alteration or loss.

There is no doubt that the development trends of artificial intelligence are bringing about major changes in modern society. The development of machine learning, natural language understanding, automated systems and robotics are creating many new opportunities. At the same time, the social and ethical implications of these trends are also increasing. Although artificial intelligence may develop and expand further in the future, it is necessary to approach it with caution for its safe and fair use.

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