

THE ROLE AND FUTURE OF ARTIFICIAL INTELLIGENCE IN HUMAN LIFE

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Annotation: This paper provides a detailed analysis of the role of artificial intelligence (AI) technologies in modern society, its developmental history, core domains, everyday applications, advantages, disadvantages, and future prospects. It highlights how the integration of AI into education, medicine, transport, finance, and industry simplifies human life while simultaneously giving rise to new social and ethical challenges. Furthermore, the issues of future collaboration between AI and humans are examined.

Keywords: Artificial intelligence, digital technologies, machine learning, neural networks, automation, big data, robotics, algorithm.

Annotatsiya: Ushbu ishda sun'iy intellekt (SI) texnologiyalarining zamonaviy jamiyatdagi o'rni, uning rivojlanish tarixi, asosiy yo'nalishlari, kundalik hayotdagi qo'llanilishi, afzallik va kamchiliklari hamda kelajakdagi istiqbollari batafsil tahlil qilinadi. Sun'iy intellektning ta'lim, tibbiyot, transport, moliya va sanoat sohalariga kirib borishi inson hayotini yengillashtirayotgani bilan birga yangi ijtimoiy va axloqiy muammolarni ham yuzaga keltirayotgani yoritiladi. Shuningdek, SI va inson o'rtasidagi kelajakdagi hamkorlik masalalari ham ko'rib chiqiladi.

Аннотация: В данной работе подробно анализируются роль технологий искусственного интеллекта (ИИ) в современном обществе, история их развития, основные направления, применение в повседневной жизни, а также их преимущества, недостатки и перспективы на будущее. Освещается проникновение искусственного интеллекта в такие сферы, как образование, медицина, транспорт, финансы и промышленность, что, с одной стороны, облегчает жизнь человека, а с другой — порождает новые социальные и этические проблемы. Также рассматриваются вопросы будущего взаимодействия человека и искусственного интеллекта.

In the current era of globalization and digital technology, humanity is developing at an unprecedented pace. As a result of progress in science and technology, many new technologies are entering our lives. Among them, one of the most important and fastest-growing fields is artificial intelligence (AI). AI is a technology aimed at performing processes inherent to human intelligence—such as thinking, learning, analyzing, and decision-making—through computer systems. While initially created to solve simple mathematical and logical problems, today it performs high-level tasks such as complex medical diagnostics, autonomous driving, and text/image analysis. Today, people not only use computers and the internet but also interact with smart systems capable of independent

decision-making. Consequently, AI has already become an integral part of modern society. The primary goal of this thesis is to analyze the role of AI in society, its pros and cons, and to study its future developmental prospects.

THE HISTORY AND ESSENCE OF AI DEVELOPMENT

The concept of artificial intelligence emerged in the mid-20th century. The term "artificial intelligence" was first used as a scientific term at the Dartmouth Conference in 1956. Since then, scientists began researching the transfer of human cognition to machines. In its early stages, AI was very simple and operated only based on predefined rules. However, the advancement of computer technology, the emergence of the internet, and the accumulation of big data led to a sharp acceleration in AI development. Today, AI includes the following core areas:

Machine Learning: Systems learning from data.

Neural Networks: Systems modeled after the structure of the human brain.

Natural Language Processing (NLP): Understanding and generating human language.

Robotics: Performing movements and tasks through physical devices.

The fundamental characteristic of AI is its ability to improve itself over time based on experience, which fundamentally distinguishes it from ordinary software.

AI IN EVERYDAY LIFE

AI has permeated nearly every aspect of human life:

Digital Technologies: AI is widely used in smartphones and internet services through voice recognition, virtual assistants, and automatic translators.

Social Media: Platforms like Instagram, YouTube, and TikTok use AI algorithms to recommend content based on user interests.

Education: AI ensures an individual approach by providing tasks tailored to each student's knowledge level.

Medicine: AI is crucial for early disease detection, analyzing MRI/X-ray images, and developing pharmaceuticals.

Transport: Self-driving cars and GPS systems rely on AI to enhance road safety.

Finance: Banks use AI for fraud detection and credit history analysis.

ADVANTAGES AND DISADVANTAGES

Advantages: Processing large volumes of data with extreme speed and accuracy. Automating repetitive and monotonous tasks, allowing humans to focus on creative work. Contributing to scientific breakthroughs in space research and climate analysis. Reducing human error and increasing precision in medicine and industry.

Disadvantages: Job displacement due to automation. Risks to personal data privacy and security. Technological dependency and a potential decline in independent critical thinking. The risk of AI systems being used for malicious purposes, necessitating ethical standards and control.

FUTURE DEVELOPMENT

In the future, AI will integrate deeper into society through smart cities and fully automated factories. Education will shift toward personalized curricula, and medicine will expand its diagnostic capabilities. However, the most critical issue remains maintaining the balance between humans and AI. AI should remain a supportive tool rather than a replacement for humans.

AI is a vital factor in the progress of modern society. While it simplifies life and increases efficiency, its negative aspects must be considered. Using AI wisely and ensuring it serves human interests is a pressing task. In the future, AI will develop in cooperation with humans to enhance social welfare.

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