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# THE MAIN AREAS OF APPLICATION AND THE SPECIFIC FEATURES OF ARTIFICIAL INTELLIGENCE RESEARCH

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**Annotation:** The article analyzes the main fields of application of artificial intelligence and the philosophical features of its study. It examines the transformation of labor, medicine, education, social governance, and culture under the influence of AI. Special attention is paid to interdisciplinarity, ethical dilemmas, the problem of responsibility, and the impact of technology on human identity. The study demonstrates that AI is not only a technical tool but also a factor reshaping social institutions and worldviews.

**Key words:** artificial intelligence, philosophy, ethics, labor, education, culture, responsibility, identity.

**Аннотация:** Статья посвящена анализу основных сфер применения искусственного интеллекта и философских особенностей его исследования. Рассматриваются трансформации труда, медицины, образования, социального управления и культуры под влиянием ИИ. Особое внимание уделено вопросам междисциплинарности, этических дилемм, проблеме ответственности и влиянию технологий на человеческую идентичность. Показано, что ИИ является не только техническим инструментом, но и фактором изменения социальных институтов и мировоззрения.

**КЛЮЧЕВЫЕ СЛОВА:** искусственный интеллект, философия, этика, труд, образование, культура, ответственность, идентичность.

Artificial intelligence occupies a key place in modern civilization and has become a factor of profound social and cultural transformation. Its application is not limited to technical tasks: AI affects structures of thinking, the nature of human labor, mechanisms of power, and moral norms. In this context, philosophical analysis gains particular significance, enabling us to understand not only the functional capabilities of technologies but also their impact on human existence. One of the central spheres of AI application is the economy. Automation of production processes, logistics, and financial operations leads to a reduction of routine labor and a transformation of society's professional structure. Machines take on computational and analytical functions previously performed by humans. This raises questions about the future of employment, fair distribution of resources, and preservation of human dignity amid technological competition. Philosophically important is the reconsideration of the meaning of labor: from physical activity to creativity, innovation, and management.

In medicine, artificial intelligence is used for diagnostics, data analysis, disease prediction, and the development of personalized treatments. Technologies increase the accuracy of medical decisions and expand access to high-quality care. However, an ethical dilemma of responsibility arises: who is accountable for an algorithm's error? If a system makes decisions that affect human life, it becomes necessary to define the boundaries of human and machine participation. Moreover, the medicalization of digital data raises questions of privacy and personal autonomy, as medical information becomes part of global technological systems.In education, artificial intelligence contributes to the creation of personalized learning programs and new forms of knowledge transmission. It becomes not just a tool but a partner in human cognition. At the same time, the nature of knowledge itself is transformed: the

value shifts from memorizing information to the ability to think critically, evaluate sources, and engage creatively with technology. The philosophical problem lies in determining whether AI can become an independent bearer of knowledge or whether its role will remain auxiliary. This raises the question of the limits of human cognition and the possibility of "non-human intelligence." In the sphere of government and social administration, AI is used for big data analysis, population behavior forecasting, biometric identification, and security provision. These technologies can increase the efficiency of governance but also create the threat of total surveillance, manipulation, and human rights violations. Philosophy raises questions about the relationship between freedom and order, as well as the nature of power in the digital age. If algorithms make decisions, the structure of political responsibility and the subjectivity of citizens fundamentally change.

The cultural and communicative spheres are also undergoing transformation under the influence of AI. Generative models, virtual environments, and digital media create new forms of creativity and communication. The boundaries between reality and virtuality become blurred, which affects human self-perception and identity. New cultural practices emerge in which people interact not only with one another but also with artificial agents. This raises the question of what it means to be human in the age of intelligent machines.A distinctive feature of AI research is its interdisciplinary character. It unites philosophy, logic, computer science, psychology, neurobiology, and sociology, forming a new space of knowledge. Despite rapid technological progress, the nature of consciousness remains unresolved, making the theoretical foundations of AI incomplete. Philosophical debates about thinking, consciousness, and free will continue to shape the directions of scientific inquiry. The unpredictability of algorithms, their opacity, and their ability to self-learn raise questions of trust and control. If a system's decisions cannot be explained, there is a risk of losing human influence over technology.

The development of artificial intelligence also touches upon the problem of changing the structure of human cognition. For centuries, the human being was perceived as the sole bearer of rationality, capable of analyzing, interpreting, and creating knowledge. The emergence of AI calls into question the exclusivity of this position. If a machine can learn, build models of reality, and draw conclusions, the question arises: is cognition an exclusively human property, or can it exist in a non-biological form? This dilemma has serious implications for the philosophy of science. It forces us to reconsider traditional notions of the subject of knowledge, as AI effectively becomes a new participant in the epistemological process. Furthermore, AI is transforming methods of storing and processing information. Humans are no longer the only creators of knowledge — a significant portion of data is generated, analyzed, and structured by autonomous systems. These processes lead to knowledge existing outside human consciousness, in the form of self-organizing digital structures. This raises the issue of the limits of control: can humanity govern a system whose scale exceeds the capabilities of the individual mind? It becomes evident that philosophical reflection must include not only the study of technology but also the analysis of changes in cognitive ecology — the environment in which cognition takes place. An important aspect is the transformation of communication. Artificial intelligence creates new forms of human interaction: digital platforms, virtual interlocutors, automated translation systems, and social networks. Communication becomes faster but less profound. Algorithms manage the visibility of information, select content, and create informational "bubbles" in which individuals encounter only like-minded views. This weakens critical thinking and reinforces social fragmentation. A philosophically significant question arises about freedom under algorithmic influence: how free is a person if technological systems shape their perception of the world? Equally important is the problem of moral autonomy. In conditions where AI offers solutions, evaluates

behavior, and predicts actions, humans risk losing the ability to make independent decisions. Gradual reliance on algorithmic assistance may lead to declining responsibility and the erosion of moral judgment skills. From a philosophical perspective, this suggests a transition from ethics of subjective responsibility to ethics of distributed responsibility, where the moral consequences of actions are shared between humans and technology. However, such a model still lacks clear normative foundations, creating the risk of a moral vacuum. AI technologies also influence the cultural domain. Generative models are capable of creating music, texts, images, and even artistic styles, raising the question of the nature of creativity. If a machine can produce cultural products, does creativity remain a uniquely human act? Some philosophers argue that creativity requires conscious experience and intention and is therefore inaccessible to AI. Others maintain that the result matters more than the subject who created it. This debate points to profound changes in the understanding of art, authorship, and the value of cultural forms. A special place is occupied by the problem of the future of human identity. Interaction with AI forms new models of self-perception: a person begins to see themselves not as the opposite of a machine but as an element of a unified techno-social system. The idea of posthuman existence emerges, in which biological and technological forms of life may coexist and complement each other.

Thus, the application of artificial intelligence goes far beyond engineering and influences the fundamental understanding of the human being, society, and culture. AI becomes a factor of civilizational transition, in which values, norms, and social structures are transformed. Philosophical reflection on these processes is necessary for forming humanistic principles capable of ensuring the responsible development of technologies and preserving the central role of the human being in a world rapidly changing under the influence of artificial reason.

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