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## **ARTIFICIAL INTELLIGENCE: OPPORTUNITIES AND CHALLENGES**

***Abstract.** Artificial intelligence continues to shape industries, optimize processes and revolutionize technology, but it brings with it certain risks. Despite its transformative potential, the uncontrolled development of AI poses key dangers to society.*

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## **ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ: ВОЗМОЖНОСТИ И ПРОБЛЕМЫ**

***Аннотация.** Искусственный интеллект продолжает формировать отрасли, оптимизировать процессы и революционизировать технологии, однако он несет с собой определенные риски. Несмотря на свой преобразующий потенциал, неконтролируемое развитие ИИ представляет ключевые опасности для общества.*

The loss of privacy is one of the main issues surrounding the development of Artificial intelligence (AI). Because AI systems rely heavily on data, frequently from individual users, privacy concerns are raised because algorithms learn from habits, personal information, and even sensitive financial or medical data. In her work on "surveillance capitalism," Shoshana Zuboff claims that businesses frequently gather and examine user data without complete knowledge or informed consent, posing moral questions about power and privacy [1]. The possibility for invasive surveillance is growing along with AI technology, making it harder for people to protect their privacy.

Autonomy and control are additional issues. The pursuit of advanced AI systems capable of decision-making brings questions about who, or what, is in control. AI with autonomous decision-making powers raises ethical questions about accountability and oversight. For instance, autonomous weapons and self-governing algorithms could make critical decisions without human intervention, potentially leading to unwanted consequences, harm, or conflict escalation [2]. Maintaining human oversight and control over AI is essential to prevent scenarios where machines act in ways that are harmful or contrary to human values.

The automation of tasks through AI has also led to concerns over job displacement in potentially affected industries. While AI has enhanced productivity in manufacturing, logistics, and even creative industries, the resulting automation has begun to replace jobs traditionally occupied by humans. A report by McKinsey & Company [3] estimates that up to 375 million jobs could be displaced by automation by 2030, leading to large-scale unemployment and economic inequality. Although developments in artificial intelligence creates new roles, there is concern that these new jobs may require specialized skills, making them inaccessible to the laid off workforce without significant retraining efforts.

Another danger of AI development lies in the potential for bias and discrimination. AI systems, though designed to be objective, often learn from biased data. When trained on datasets that reflect human prejudices, these biases can become embedded in AI decision-making processes, affecting areas like hiring, criminal justice, and lending. Studies have shown that AI can inadvertently discriminate against certain demographic groups, leading to outcomes that worsen societal inequalities [3]. To mitigate this risk, it is crucial to improve data quality and promote fairness and transparency in AI algorithms.

Finally, some experts warn about the potential for AI to surpass human intelligence, creating scenarios where machines could act independently in ways that humans cannot fully comprehend or control. This notion, known as the "AI singularity," raises concerns about the long-term survival of humanity. Although it may seem speculative, researchers like Bostrom [4] have highlighted the need for ethical research and development practices to guide AI's evolution and minimize existential threats.

One thing that may relieve the situation to some extent, is the ongoing cooperation among countries and IT companies to establish proper rules for controlled development of artificial intelligence, to prevent it from stagnation and negatively affecting the society. One such event happened in Fall of 2023 when Elon Musk, Mark Zuckerberg and other influential tech figures met with US senators to discuss regulations pertaining to artificial intelligence. Kazakhstan is taking action as well. The minister of digital development, innovation and aerospace industry, Zhaslan Madiyev hinted about the law "On artificial intelligence" becoming effective in 2025 [5].

In conclusion, the development of artificial intelligence, while promising, demands a proactive approach to its ethical, social, and regulatory implications. As AI capabilities continue to grow, society must establish robust safeguards to minimize its risks and ensure that these technologies align with human values. Balancing innovation with caution is essential for responsibly harnessing AI's potential for a better and safe future.

## References

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### **ПРИМЕНЕНИЕ НЕЙРОСЕТЕЙ ДЛЯ НАВИГАЦИИ И УПРАВЛЕНИЯ БЕСПИЛОТНЫМИ ЛЕТАТЕЛЬНЫМИ АППАРАТАМИ**

***Аннотация.** В данной статье рассматривается использование нейросетей для повышения эффективности навигации и управления беспилотными летательными аппаратами (БПЛА). Обсуждаются основные подходы к навигации и управлению БПЛА с применением нейросетей, включая методы обработки данных.*

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### **APPLICATION OF NEURAL NETWORKS FOR NAVIGATION AND CONTROL OF UNMANNED AERIAL VEHICLES**