

evaluation would make it possible to assess the real effectiveness of mobility programmes and to improve their structure in accordance with labour market needs and the requirements of modern engineering education.

International internships are a powerful tool for improving the quality of mechanical engineering education. They help students become more competitive, adapt to the demands of the global labor market, and integrate into international production processes. For universities, this raises prestige and opens new channels of cooperation with industry, while for regional economies it ensures the availability of qualified specialists capable of working according to modern standards.

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ARTIFICIAL INTELLIGENCE AS A KEY DRIVER OF DIGITAL TRANSFORMATION IN MODERN SOCIETY

In recent decades, digital technologies have become a fundamental part of social, economic, and engineering processes. Among these technologies, artificial intelligence (AI) occupies a central place due to its ability to analyze large amounts of data, automate processes, and support decision-making. The rapid development of AI significantly influences global challenges and creates new opportunities for innovation.

The work aims to analyze the role of artificial intelligence in digital transformation and to identify its impact on modern society, engineering, and economic systems.

First, it is necessary to define artificial intelligence and its core functions. Artificial intelligence refers to computer systems that can perform tasks that typically require human intelligence, such as learning, reasoning, and problem-solving. Artificial intelligence is the study of agents that perceive their environment and take actions that maximize their chances of achieving goals. This definition highlights the adaptive and goal-oriented nature of AI systems.

AI technologies include machine learning, natural language processing, computer vision, and robotics. These technologies are widely applied in various fields, including healthcare, finance, manufacturing, and transportation. For example, machine learning algorithms can analyze large datasets to detect patterns and make predictions, thereby significantly improving the efficiency and accuracy of business processes.

Second, digital transformation should be considered as a broader concept that integrates AI into organizational and societal systems. Digital transformation refers to the integration of digital technologies into all areas of business and society, fundamentally changing how organizations operate and deliver value. Digital transformation involves the use of technologies to improve processes, enhance customer experience, and create new business models (Vial, 2019).

The adoption of artificial intelligence in business continues to increase globally, with more than half of surveyed companies already implementing AI in at least one business function. According to the State of AI (2021), 56% of organizations reported AI adoption, indicating steady growth compared to previous years (McKinsey Global Institute, 2021). The report also highlights that companies using AI most effectively are those that integrate it across multiple business functions and combine it with structured management practices.

Artificial intelligence plays a key role in this transformation by enabling automation and data-driven decision-making. Companies increasingly rely on AI to optimize operations, reduce costs, and improve productivity. For instance, AI-powered systems can automate routine tasks, allowing employees to focus on more complex and creative activities. Moreover, AI enhances customer interaction through chatbots and personalized recommendations.

Third, the economic impact of artificial intelligence must be examined. AI contributes to economic growth by increasing productivity and fostering innovation. However, it also raises concerns about job displacement and inequality. AI could add up to \$13 trillion to the global economy by 2030. However, it may also automate up to 30% of current work activities. This dual effect demonstrates both the opportunities and challenges associated with AI adoption.

From an engineering perspective, AI enables the development of smart systems and intelligent infrastructures. For example, smart cities use AI to manage traffic, energy consumption, and public services more efficiently. Engineers are increasingly required to integrate AI technologies into system design, which demands new skills and interdisciplinary knowledge.

Furthermore, artificial intelligence raises important ethical and social issues. These include data privacy, algorithmic bias, and the transparency of decision-making processes. The use of AI systems must be carefully regulated to ensure fairness and accountability. Ethical AI should be transparent, accountable, and aligned with human values (Floridi, Cowls, Beltrametti, et al., 2018).

In addition, global challenges such as climate change, healthcare access, and cybersecurity can be addressed with AI technologies. For example, AI can optimize energy consumption, support medical diagnostics, and detect cyber threats in real time. This demonstrates the potential of AI to contribute to sustainable development and improve the quality of life.

Therefore, artificial intelligence is a powerful driver of digital transformation, influencing engineering, economic systems, and society as a whole. While it creates significant opportunities for innovation and growth, it also requires careful consideration of ethical, social, and economic implications. Further research is needed to ensure that AI technologies are developed and implemented responsibly.

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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MODERN GRAPHIC DESIGN

Artificial intelligence in graphic design should be seen primarily as a tool that supports the creative process rather than replaces it. Today AI technologies such as ChatGPT, DALL·E, and Adobe Firefly can generate visual compositions, suggest stylistic directions and assist at the ideation stage. This can significantly speed up the designer's workflow and provide a wide range of options that can later be refined and developed further (Kolisnyk, 2025). At the same time, the effectiveness of these tools largely depends on the user. It is the designer who formulates the prompt, evaluates the