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Alina Demchenko¹, Nataliia Skrypyk²

¹ student of group Д-21-23 KhNAHU

² PhD (Pedagogy), Associate Professor KhNAHU

ARTIFICIAL INTELLIGENCE IN MODERN LIFE

Artificial intelligence (AI) refers to computer systems and software that simulate human cognitive functions, such as problem-solving, learning, and decision-making. By analysing human cognitive patterns, AI enables intelligent systems to process data autonomously. Its rapid advancement has transformed multiple industries, significantly impacting modern technology.

AI is integrated into daily life through fingerprint scanners, facial recognition (e.g., Face ID), and applications like Diia. Virtual assistants such as ChatGPT, Siri, and Alexa, along with smart home systems and automotive autopilots, highlight AI's growing influence.

AI revolutionizes transportation, manufacturing, finance, healthcare, and education. Google Maps uses AI to analyse traffic in real-time, incorporating road incidents and construction updates. In manufacturing, predictive maintenance prevents downtime, while AI-driven quality control enhances efficiency.

Financial institutions use AI to detect fraud, assess investment risks, and facilitate payment processing. AI supports mobile check deposits, insurance evaluations, and personalized investment advice.

AI enhances diagnostic accuracy, drug discovery, and patient monitoring. AI-driven tools assist medical professionals in detecting diseases, improving treatment outcomes. Virtual nursing assistants provide continuous monitoring, ensuring timely interventions. AI also accelerates drug research, reducing development time.

AI transforms education by personalizing learning experiences and improving administrative processes. It digitizes textbooks, detects plagiarism, and assesses

student engagement. Adaptive learning platforms customize content to individual student needs, optimizing educational outcomes.

AI requires significant computational power, relying on cloud infrastructure for data storage, processing, and retrieval. Without cloud technology, AI models would lack the capacity to analyse large datasets efficiently.

ChatGPT exemplifies AI's capabilities, enabling users to interact with an advanced natural language processing model. It assists students, researchers, and professionals by composing essays, refining code, and generating human-like responses. The development of ChatGPT involves:

1. **Data Collection:** Developers compile large datasets from books, articles, and websites;

2. **Data Processing:** Texts are preprocessed to remove irrelevant or sensitive information;

3. **Model Training:** AI algorithms analyse these datasets to identify linguistic patterns;

4. **Continuous Updates:** Iterative testing refines accuracy and mitigates biases.

ChatGPT does not access real-time internet data. Instead, it generates responses based on pre-existing datasets, sometimes leading to AI "hallucination."

Unlike search engines, ChatGPT provides interactive, structured responses:

Personalized Responses: Users receive detailed answers through dynamic interactions.

Information Synthesis: ChatGPT organizes complex information concisely.

Content Generation: It creates reports, summaries, and creative writing.

ChatGPT's versatility makes it invaluable in various fields:

Information Retrieval: Answers factual queries and explains concepts;

Educational Support: Assists students with research and essay writing;

Content Creation: Generates marketing materials and articles;

Decision Support: Provides business insights and problem-solving assistance;

Idea Development: Facilitates brainstorming and creative processes;

Language Translation: Enhances multilingual communication;

Data Organization: Summarizes extensive information efficiently.

AI is revolutionizing industries, from healthcare and education to finance and manufacturing. ChatGPT exemplifies AI's capabilities, offering valuable support in information processing, learning, and content creation. As AI advances, its applications will expand, enhancing efficiency, decision-making, and quality of life. AI's integration into daily routines underscores its transformative role in modern civilization, shaping future technology and human interaction.