URL: https://esu.com.ua/article-882296?utm_source=chatgpt.com.

3. Tesup. Від узбережжя до дому: як енергія припливів може допомогти місцевим громадам. *TESUP Deutschland*. URL: https://tesup.com/ua/blogs/post/що-таке-енергія-припливів.

4. Енергія припливів та відливів. Як це працює?. *Альтернативна енергетика*. URL: https://moesonce.com/povidomlennya/energiya-pripliviv-ta-vidliviv_-yak-ce-pracyue.html.

5. Учасники проектів Вікімедіа. Припливи та відпливи – Вікіпедія. *Вікіпедія*. URL: https://uk.wikipedia.org/wiki/Припливи_та_відпливи.

УДК 004.8:316.422

Циганкова Є.О.,
Ганніченко Т.А.

ARTIFICIAL INTELLIGENCE AS A FOUNDATION FOR SOCIAL TRANSFORMATION

Стаття аналізує вплив штучного інтелекту на різні сфери життя, зокрема освіту, медицину та соціальні системи, а також підкреслює важливість етичних аспектів і міждисциплінарних зусиль у його розвитку.

Ключові слова: *штучний інтелект, інформаційні технології, людство, соціальне життя.*

The article analyzes the impact of artificial intelligence on various spheres of life, including education, medicine and social systems, and also emphasizes the importance of ethical aspects and interdisciplinary efforts in its development.

Keywords*: artificial intelligence, information technologies, humanity, social life.*

Modern information technologies and intellectual capital have become the determining factors of the progress of civilization. The rapid development of technical progress, including digital media, artificial intelligence and the Internet of Things, is significantly transforming human activities and social systems. It is important to be aware of these changes, their concepts and the main characteristics of artificial intelligence, as they have a direct impact on our daily lives and the future of society.

Humanity has always sought change, but at the same time felt fear of it. The transition from hand tools to machines, the replacement of steam with electric or nuclear energy, as well as the latest scientific and technological developments have significantly transformed the labor process. Although these changes promised to expand productive opportunities, they have caused concern among a part of the population. Today, humanity is again on the verge of new discoveries, especially in the field of artificial intelligence, which, although exciting, also cause serious concerns.

Artificial intelligence as a scientific direction arose with the advent of digital computers. In 1950, the English mathematician Alan Turing, in his article “Computing Machines and Intelligence,” noted that interest in “thinking machines” arose thanks to digital computers. He described the basic structure of a digital computer, the interaction of its components, and proposed the use of a binary number system. Turing proved that computing machines can solve problems of any complexity, and since all digital computers are logically the same, he called them universal machines. [2]

People often tend to intellectualize their goals, believing that thinking is exclusively an attribute of the human brain. However, over the past fifty years, we have increasingly realized that many unconscious processes can imitate conscious thinking.

Artificial intelligence has the potential to radically change the world, opening up new horizons in education, medicine, and social life, adapting to the needs of modern society. The use of AI in education provides individualized curricula and interactive methods that help each student develop at a comfortable pace. In medicine, AI contributes to the diagnosis of diseases, the development of new

drugs and the creation of personalized treatment plans. In social life, it provides support through chatbots and helps to identify psychological problems.

Along with these opportunities, the development of AI poses challenges, such as automation, which can threaten jobs, as well as ethical and security issues. Therefore, it is important to create effective regulatory mechanisms to ensure the ethical use of artificial intelligence.

The formation of AI requires efforts in mathematics, biology, psychology and cybernetics, as well as in philosophy. The role of philosophy goes beyond establishing ethical foundations for human interaction with AI; it involves understanding its role in the fate of civilization. This understanding is key to coordinating efforts in developing a model of AI that meets the task of cooperation with human intelligence and society. It depends on understanding the dynamics of how we think about AI. [1]

Unlike humans, who think naturally, robots only imitate the process of thinking, which allows them to remotely control gadgets and make predictions for various industries. An AI system has a limited amount of processed data and is usually used to perform routine tasks. It works at high speed, performing up to 10 million operations per second, and can implement complex AI programs. However, it can only be trained on large amounts of data, and it is not capable of abstract thinking, which, due to its low adaptability, limits its ability to solve problems and correct failures. [3]

It is therefore important to note that emotions, intuition, and social influences play a significant role in shaping individual actions and choices, highlighting the complex interaction between rational thinking and other cognitive and affective processes. At the same time, the rapid development of artificial intelligence, ethical dilemmas in biotechnology, and the spread of information are forcing us to rethink the concept of human intelligence and its relationship to the evolving world.

References:

1. Міщенко В.І., Шимченко О.В. Штучний інтелект у долі людини: погляд з майбутнього. Філософія в сучасному світі.
URL: https://repository.kpi.kharkov.ua/items/999104a7-36a0-47dc-b671-3f0d0f903b99
2. Матвійчук А. Можливості та перспективи створення штучного інтелекту // Вісник НАН України. – 2011.
URL: http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&2_S21P03=FILA=&2_S21STR=vnanu_2011_12_9
3. Ягорі Я., У світі штучного інтелекту все дуже просто. URL: https://www.epravda.com.ua/publications/2023/08/15/703265/

УДК 811.111

Чаус В. В.
Саламатіна О.О.

CRISPR-Cas: A GENETIC REVOLUTION
(CRISPR-Cas: ГЕНЕТИЧНА РЕВОЛЮЦІЯ)

У публікації розглядаються основні аспекти її застосування в сільському господарстві, зокрема покращення врожайності, якості культур, стійкості до хвороб і гербіцидів. Описано також її роль у вдосконаленні селекційних методів, прискоренні процесу доместикації та впровадженні нових підходів до регуляції генів. Обговорюються перспективи технології та можливі виклики, пов'язані з її ефективністю, нормативним регулюванням і сприйняттям суспільством.