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LEGAL REGULATION OF NEURAL NETWORKS

The main goal of our research is not only to explain the concept of neural networks and their functioning but also to analyze the regulation of these mechanisms from a legal point of view.

In the course of the research, we pay special attention to how international law affects the regulation of neural networks and provide examples of the integration of these legal norms into our legislation.

Neural networks can find their application in business, research, and education, as well as in other areas where the artificial intelligence is consistent with ethical and moral principles. Neural networks can be in various areas where automation or optimization of work processes is required, as well as in industries related to text and speech data processing. As an example, they can be applied in the following areas:

1. Communication with users: to answer questions and provide information to users;
2. Decision support: to analyze data and make recommendations in a particular field;
3. Editing and preparation of texts;
4. Training and education: for training and education support, such as creating tests, knowledge control, and learning materials.
5. Medicine and science: for medical and other research when the analysis and processing of large amounts of data are required.
6. Rebuilding our state: if used correctly, neural networks can accelerate the rebuilding of the state in the economy and other areas to solve some issues, such as logistics.

That is, neural networks can be trained on large amounts of data and used for a variety of tasks, making them a very powerful tool for solving complex problems.

A neural network is a mathematical model that consists of connected neurons to solve a specific task. Neural networks are created based on the functioning of the biological brain, where they can receive, process, and analyze information.

Each neuron in a neural network receives input data, processes it using connections with other neurons, and produces output data. It allows a neural network to perform complex operations with data.

Therefore, neural networks cannot be equated to computer programs, which are regulated by the legislation of Ukraine. According to the Law of Ukraine "On Copyright and Related Rights", computer programs are subject to copyright. However, neural networks, which are complex mathematical models, are not currently regulated by the relevant legislative acts as a separate type of intellectual property.

The law defines copyright as the right to the result of creative work expressed in an original work. A computer program is considered a work from the moment it is created if it is original and is an expression of the intellectual creativity of its author. Neural networks may also contain copyrighted elements, so they are protected by copyright. In case of disputes regarding the legal protection of neural networks, additional research and consultations with legal and information technology experts are required. Legislation may regulate some aspects of the operation and use of neural networks, particularly concerning the content they generate if it contains the intellectual property of others.

In international law, the laws of other countries may require companies, such as Starlink, that create and use such technologies to comply with some rules and standards to ensure the safe and ethical use of such technologies. In addition, like any other Internet service, neural networks are subject to cybersecurity laws that aim to prevent cyberattacks, data theft, and other online crimes.

At the international level, the use of neural networks is regulated in different ways. One of them is legislative regulation, which requires compliance with certain standards and procedures. Such regulations include the Budapest Convention on Cybercrime of June 2001, the General European Convention for the Protection of Personal Data, and others.

There are also some initiatives and standards on the ethical use of artificial intelligence at the international level. For example, the European Commission's Artificial Intelligence Guidelines provide guidance on the ethical, legal, and technical use of artificial intelligence.

In addition, on an international scale, some organizations, such as the United Nations, are considering the ethical use of artificial intelligence and developing recommendations for its regulation.

The European Commission's Recommendations on Artificial Intelligence were published in April 2018 and guide on the ethical, legal and technical use of artificial intelligence. These guidelines were developed with the participation of a group of experts on artificial intelligence, including representatives of the public, academia and industry. The European Commission's recommendations consist of key principles that must be observed when using artificial intelligence:

Human controllability and safety - artificial intelligence should provide control over the technology and ensure safety for humans.

Regulation - artificial intelligence must comply with laws and regulations.

Ensuring privacy and personal data protection - artificial intelligence must ensure the protection of users' personal data.

Ethics - artificial intelligence should adhere to ethical principles and promote human well-being.

Work and society - artificial intelligence should contribute to work and society without harming people.

The guidelines also include recommendations on how companies should use artificial intelligence in various areas, including health, transportation, the legal system, finance, and energy. The Commission advises companies to assess the impact on human rights and freedoms, as well as to evaluate the possible risks of using artificial intelligence in various areas.

The European Commission's recommendations on artificial intelligence are not legally binding, but they may become the basis for future legislative and regulatory initiatives. Currently, the European Commission is actively working on the development of legislation on artificial intelligence, which will be based on the principles of the recommendation.

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