

LEGAL ASPECTS OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN JURISPRUDENCE: THE EXPERIENCE OF UKRAINE

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Annotation. The aim of the work is to study and analyze the role of artificial intelligence in jurisprudence in the context of the European integration of Ukraine.

The methodological basis of the study is the dialectical method of scientific knowledge, since with its help the genesis of the development of artificial intelligence in society in general, including in jurisprudence, interaction with other elements of the legal system of Ukraine, prospects for development in domestic criminology, etc. was revealed. The anthropological approach helped reveal the importance of reforming domestic criminology in the context of international legal standards in the field of human rights. From the standpoint of the value approach, the role of artificial intelligence in modern criminology is investigated. The work uses such general scientific methods as: system analysis, going from the general to the specific, analogy, generalization, comparison. Special-legal methods, such as comparative-legal, formal-dogmatic, sociological-legal, cultural-legal.

Results. The article found that artificial intelligence is popular in many areas of human activity, in particular in jurisprudence: for checking documents, conducting legal research, forming accounts for court costs, distributing court cases between judges, drawing up contracts, searching and highlighting the necessary information in the text legal document, detection and investigation of crimes, conducting forensic examinations, etc. It has been proven that the field of digital forensics covers the detection, recording, preliminary investigation and use of computer information, digital traces and means of processing them to solve tasks related to the detection, detection, investigation and prevention of crimes.

Conclusions. Digital forensics focuses on the patterns of occurrence and use of digital traces, the development of technical means, techniques and methods for the detection, recording, extraction and study of digital information (evidence), as well as the development of techniques and methods for processing digital information. This is a branch of criminology that studies the means to uncover targets based on knowledge of these patterns, investigate and prevent crimes. During martial law, the possibilities of using artificial intelligence in Ukraine are implemented in three areas of criminal justice: preventive activities, pre-trial investigation activities, and trial activities.

Key words: artificial intelligence, jurisprudence, new technologies, legal system, digital forensics.

1. Introduction.

Today in Ukraine, artificial intelligence is becoming an effective tool that is actively used in jurisprudence. This trend can be explained by the European integration processes of Ukraine, the expediency of technological modernization of civil, economic and criminal justice, taken by Ukraine as a candidate for joining the European Union, obligations to build artificial intelligence systems that will be useful for citizens, business and society.

The archival importance of the use of artificial intelligence in Ukraine was determined by the challenges of the full-scale invasion of russia into Ukraine: the «huge number» of war crimes, the need to collect and process a «mountain» of evidence, work with a million different types of documents, the need to find an evidence base in the occupied territory or which is dangerous to approach, etc. The representatives of the judiciary understand that it is no longer possible to solve these problems by “traditional” methods, and that they should resort to the latest technologies.

All this testifies to the importance for domestic jurisprudence of research into the role of artificial intelligence in jurisprudence.

2. Analysis of scientific publications.

Some aspects of the investigated problem (the development of artificial intelligence as a direction of scientific knowledge; types of artificial intelligence; the influence of European standards on the reformation of the concept and practice of criminology; specifics of the investigation of war crimes, etc.) were carried out by modern scientists and practitioners: I. Avramuk, O. Baranov, Yu. Baltrunene, D. Boyko, I. Horodyskyi, A. Wittenberg, M. Demura, V. Zhuravel, V. Konovalova, A. Kolodina, A. Kostin, D. Klepka, S. Matuyelene, O. Striltsiv, O. Tarasenko, T. Fedorova, V. Khrapach [4], V. Shepitko, V. Shevchuk, V. Yaremchuk and others.

3. The aim of the work is to study and analyze the role of artificial intelligence in jurisprudence in the context of the European integration of Ukraine.

4. Review and discussion.

Artificial intelligence is a scientific discipline that deals with the modeling of the human mind. Its systems are purely software-based and operate in a virtual world or can be integrated into hardware. Today, artificial intelligence is also popular in jurisprudence, where it is used to perform such tasks as: checking documents; conducting legal research; invoicing for court costs; allocation of judges to consider court cases; drawing up contracts; extracting the necessary information from the text of the legal document; etc.

However, it is worth realizing that, like any «human creation», artificial intelligence also involves potential risks associated with its development, probable technical problems and, most importantly, with the possibility of using it for «evil» to humanity, i.e. in a way that is not legal. For example, artificial intelligence can be used to create autonomous weapons that can harm people and, like any human achievement, gain popularity among the actors of criminal activity. Therefore, it is important to develop both ethical principles for the use of artificial intelligence and to take care of the proper legal framework in the field of artificial intelligence.

People of the 21st century, cannot imagine its existence without modern technologies, which are progressing every day. She uses them in various spheres of social relations: education, medicine, social security, home economics, economics, jurisprudence, the labor market, etc. It is noteworthy that with their help a person in the 21st century. can be both a «creator» and a «destroyer». Moreover, it tends to use the achievements of the latest technologies to commit crimes, violating the legal rights and interests of society, the state, and other people.

At the same time, law enforcement agencies of almost all countries of the world today resort to the use of modern scientific and technical achievements in the fight against the activities of persons who commit crimes, and are highly qualified in the selection, licensing, implementation and adaptation of technological innovations (including artificial intellect) in jurisprudence, in particular, in criminal justice.

All this testifies to the importance of scientific and technical achievements in the field of information, communications, computers, digital and other technologies, as well as to the expediency of

introducing artificial intelligence technologies in the fight against crime (in the activities of subjects of forensic medical examination, pre-trial investigation, trial, etc.).

It is worth paying attention to the opinion of the leading domestic criminologist V. Shepitka that the creation of an information society environment influenced the development and implementation of modern technologies, such as criminal technologies, information, telecommunications, digital and artificial intelligence. Under the new modern conditions, Ukrainian criminology is moving from the usual study of physically fixed traces to the study of acoustic, electronic or genomic traces. The methods, techniques and rules of collecting, researching and recording such traces have also changed. Modern crimes in the field of information and other technologies have acquired an international and transnational character, in addition, the victims of such crimes and the criminals themselves can be located in different countries of the world [8].

Artificial intelligence systems are pure software and can also operate in the virtual world (e.g. speech synthesis, video analysis software, search engines, voice and face recognition systems) or integrated into hardware (robots, unmanned vehicles, etc.), drones, objects, etc.). Therefore, artificial intelligence as a modern scientific achievement requires new forensic ideas and methods for use in the fight against crime.

Today, many Ukrainian forensic scientists implement in their works the results of scientific research devoted to the examination and development of relevant aspects of the use of digital technologies in the law enforcement activities of law enforcement and judicial bodies of a foreign state, including artificial intelligence.

In the study of the questions raised by forensic scientists, there are a lot of archival discussed aspects, in particular regarding:

- determination of the role of artificial intelligence in the operational activities of law enforcement and judicial bodies;
- analysis of regulatory gaps in the context of the use of digital technologies and the need for their improvement within the framework of European integration processes;
- comparison of the legal system of Ukraine and the legal systems of the countries of the European Union in the light of the possible use of artificial intelligence.

In addition, there are other significant aspects that are worthy of attention when studying the prospects for the use of artificial intelligence in the legal system of Ukraine (including in forensic activities).

Recently, «modern» criminals increasingly use artificial intelligence technologies, developing new methods of criminal activity using digital technologies, which leads to an increase in the level of crime [6]. Add to this the fact that the criminogenic effects of artificial intelligence create new threats and challenges for the protection of the legal rights and interests of individual citizens, the state and society as a whole, which makes countering such criminal legal measures more difficult.

It is important to note that international standards and the principles of the European strategy for the development of artificial intelligence technologies are laid down in the formation of the legislative framework in Ukraine both on the issues of using the achievements of artificial intelligence and on the issues of its «destructiveness» [2]. By developing a legislative framework based on human rights and fundamental values (as stated in the strategy we mentioned), Ukraine, as a candidate for joining the EU, undertook to build an artificial intelligence system that would be useful for its citizens, businesses and society. EU member states, Ukraine and the European Commission need to cooperate in this direction in order to ensure the advanced status of artificial intelligence technologies and the conditions for the prospects of their implementation.

Taking into account Ukraine's path to European integration, the process of improvement and development of domestic legislation on the regulation of artificial intelligence should be based on existing EU standards, rules and recommendations.

The development and introduction of «new institutions» into national legislation should incorporate the progressive European experience of law-making and law enforcement in important areas of human activity, in particular, those related to artificial intelligence. This process includes the analysis of both positive and negative results, as well as the determination of accountability procedures for errors that may lead to negative consequences [3].

The defining stage in establishing the course chosen by the European strategy for artificial intelligence in national policy is the Concept of the Development of Artificial Intelligence in Ukraine [7]. The main goal of this concept is «determining the strategic direction and main tasks in the field of artificial intelligence technology development», as well as «protecting the rights and legitimate interests of individuals and legal entities, maintaining the competitiveness of the economy and improving the administrative system» [7].

An important stage for Ukraine is the adoption in 2018 by the Council of Europe's European Commission for the Efficiency of Justice of the Ethical Charter on the use of artificial intelligence in the judicial system and its environment, known as the «Ethical Charter». This document acts as a system of unity of principles and rules for the use of artificial intelligence in the judicial system, clearly defining the main categories of application of artificial intelligence: analysis that is predicted; advanced search systems of court practice; online dispute resolution; assistance in drafting claims; using chatbots to inform parties or provide support during litigation; categorization of provisions of legal norms according to various criteria and identification of incompatible provisions or discrepancies [1].

The adoption of the Ethical Charter resolved the issue of the introduction of artificial intelligence and contributed to the transformation of information technologies in the judicial system of Ukraine.

Another important achievement in the development of a European strategy in the field of artificial intelligence is the accession of Ukraine (which is a member of the Special Committee on Artificial Intelligence at the Council of Europe) to the Recommendations of the Organization for Economic Cooperation and Development regarding artificial intelligence (in English – Organization for Economic Cooperation and Development, Recommendation of the Council on Artificial Intelligence, OECD/LEGAL/0449) in October 2019 [6].

It is important to consider that artificial intelligence systems are often used in the activities of law enforcement agencies to solve typical tasks. However, when making decisions based on these systems, it should be remembered that, even if the results of artificial intelligence work are of high quality, the final procedural decisions still depend on the authorized person, and they have only the nature of recommendations. At the same time, it should be noted that the complexity of artificial intelligence systems can lead to shortcomings that can affect the correctness of court decisions.

Modern forensic medicine has also responded to the development of digital technologies by creating means and methods for extracting forensically important information from new types of media. Scientific and technological progress has allowed the use of digital technologies in the activities of law enforcement agencies, making pre-trial investigations more efficient and faster, and contributing to a better evidence base in solving crimes and, ultimately, improving criminal investigations.

It is known that almost any activity of individuals, including criminals and their groups, in the modern world leaves behind a unique «trace», and special importance is attached to digital traces as a key source of forensically significant information [6]. Digital, not electronic traces, now form the basis of the evidence base in solving such crimes. When it comes to your digital footprint, one thing remains constant (despite the ever-changing ways information is stored). That is, analog signals were replaced by digital coding of information.

The use of European standards of evidence in the criminal process in Ukraine indicates the orientation of the development of criminology and forensics to the European level. In such a situation, it is possible to support a new scientific direction, namely the activation of trends in the formation and application of digital forensics.

In the scientific literature, one can find various approaches to the definition and location of digital forensics in the system of criminology and forensic science. Some scientists consider digital forensics as

an independent branch of forensic science, which is a system of scientific methods for studying digital evidence for the purpose of detecting and investigating criminal violations. Others believe that digital forensics is related to the processes of collecting, receiving, storing, analyzing and presenting electronic (digital) evidence for the purpose of obtaining investigative information, evidentiary information and conducting investigations and prosecutions regarding various types of criminal offenses [5, p. 176]. Some sources define digital forensics as a complex process of collecting, obtaining, storing, analyzing and presenting electronic (digital) evidence in pretrial and judicial proceedings. From this perspective, digital forensics is considered as an important strategic direction in the development of forensics.

5. Conclusions.

The study and analysis of the role of artificial intelligence in jurisprudence made it possible to formulate the following provisions:

Today, artificial intelligence is popular in many areas of human activity, in particular in jurisprudence: for checking documents, conducting legal research, forming accounts for court costs, distributing court cases between judges, drawing up contracts, searching and extracting the necessary information in the text of a legal document, identifying and investigating crimes, conducting forensic examinations, etc.

Artificial intelligence, like any other «human creation», involves the risk of being used in an illegal way. Therefore, it is important to develop a proper deontological and legal framework in the field of artificial intelligence.

The field of digital forensics covers the detection, recording, preliminary investigation and use of computer information, digital traces and means of processing them to solve tasks related to the detection, detection, investigation and prevention of crimes. Technical tools, methods and methodological recommendations are also being developed within the framework of this field in order to optimize activities in the field of combating criminal activity in the digital space.

Thus, digital forensics is focused on the patterns of occurrence and use of digital traces, the development of technical means, techniques and methods for the detection, recording, extraction and study of digital information (evidence), as well as the development of techniques and methods for processing digital information. This is a branch of criminology that studies the means to uncover targets based on knowledge of these patterns, investigate and prevent crimes.

During martial law, the possibilities of using artificial intelligence in Ukraine are implemented in three areas of criminal justice: preventive activities, pre-trial investigation activities, and trial activities.

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