

PROBLEMS OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE DOCUMENTATION OF WAR CRIMES IN UKRAINE

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Digital technologies in modern realities are an integral component integrated into all spheres of human activity. Digitization is becoming the most important factor in the economic growth of any state and a new, innovative way of development of any society ¹. Digitization is the newest reality of the advanced countries of Europe and the whole world, therefore, also of Ukraine, which has chosen the European vector of development ². The new digital reality presents legal practice and science with many fundamentally new tasks related to the development of effective tools and models of legal regulation of various spheres of social life (in particular, in the sphere of combating crime).

On the other hand, digital reality has caused the emergence of new forms of crime – cybercrime, information fraud, a significant number of cyberattacks on enterprises and institutions, which requires counteraction by law enforcement agencies, study and research of this phenomenon. Digital information (as an integral attribute of modern crime and the activities of criminal justice bodies) determines the prospects for the development of legal science, in particular criminalistics³, which is at the forefront of the fight against crime in the realities of martial law, digitalization of society and the active use of digital technologies in various spheres of human activity.

¹ Konovalova V.O., Shevchuk V.M. (2023). Digital criminalistics as a strategic direction of formation of criminalistic knowledge. *Advanced discoveries of modern science: experience, approaches and innovations*: collection of scientific papers «SCIENTIA» III International Scientific and Theoretical Conference, January 20, 2023. Amsterdam, 73-77.

² Шевчук В. М. (2022). Європейський вектор розвитку сучасної криміналістики. *Адаптація правової системи України до права Європейського Союзу: теоретичні та практичні аспекти*: мат-ли Всеукр. наук.-практ. конф. (Полтава, 29.09.2022). Полтава, 320-323.

³ Tymoshenko Y. P., Kozachenko O. I., Kyslenko D. P., Horodetska M. S., Chubata M. V., Barhan S. S. (2022). Latest technologies in criminal investigation (testing of foreign practices in Ukraine). *Amazonia Investiga*, 11 (51), 149-160.

Modern criminalistics responds to the development of digital technologies, creating means and methods for extracting forensically significant information from new types of media. The development of scientific and technical progress makes it possible to use digital technologies in law enforcement activities, which increases efficiency and accelerates the process of pre-trial investigation, contributes to a more complete formation of the evidence base in the investigation of war crimes⁴. Under such conditions, the defining trend of criminalistics is the integration of knowledge and the application of the latest, innovative developments of science aimed at combating crime. The natural result of the informatization of the social environment is the «technologicalization» of criminalistics, the development and implementation of information, digital, telecommunication and other technologies in law enforcement practice and the judiciary⁵.

In the context of war and global threats, all practitioners in the field of international criminal justice need to expand their understanding of the essence of the latest digital technologies (for example, in social networks, geolocation and mobile communication systems, computer information and other digital traces) and the possibilities of their application in the zones of military operations⁶. Given the mass murders, rapes, looting committed by the Russian military on the territory of Ukraine, today the problem of collecting evidence of these crimes has arisen⁷, which requires the activation and spread of the use of artificial intelligence for the purpose of detecting, documenting and investigating war crimes, crimes against humanity and genocide⁸.

Artificial intelligence systems can be purely software-based and operate in a virtual world (for example, voice synthesizers, video analysis software, speech and facial recognition systems) or can be integrated into hardware (robotics, unmanned vehicles, drones or objects of the Internet of Things network. Modern man uses artificial intelligence every day – for example, to

⁴ Konovalova V. O., Shevchuk V. M. (2022). Modern criminalistics in the conditions of war: problems of adaptation and reload. *Modern research in world science: Proceedings of the 5th International scientific and practical conference* (August 7-9, 2022). Sci-conf.com.ua/l. Lviv, Ukraine, 898.

⁵ Shevchuk V. (2022). Current Issues of Criminalistics in Context of War and Global Threats. *Theory and Practice of Forensic Science and Criminalistics*. 2022. Issue 3 (28), 11–27.

⁶ Шепітько В. Ю. (2022). Формування доктрини криміналістики та судової експертизи в Україні – шлях до єдиного європейського криміналістичного простору. *Право України*, 2, 76-90.

⁷ Shepitko V. Yu., Konovalova V.O., Shevchuk V.M. et. al. (2021). Scientific and technical support of investigative activities in the context of an adversarial criminal procedure. *Issues of Crime Prevention*. Vol. 1. №. 42, 2021, 92-102.

⁸ Дуфенюк О. (2022). Розслідування воєнних злочинів в Україні: виклики, стандарти, інновації. *Baltic Journal of Legal and Social Sciences*, 1, 46–56.

translate texts, create subtitles for videos or block e-mails (spam). Therefore, artificial intelligence as the latest scientific achievement requires new criminalistic ideas and methods related to with its use in the fight against crime⁹.

The application of artificial intelligence in the documentation and investigation of war crimes in Ukraine can be useful in many aspects. The main directions in which it can be used are as follows:

1) *analysis of satellite images*. Artificial intelligence can help analyze large volumes of satellite imagery to detect changes in the landscape, including buildings, roads, and infrastructure that may be linked to war crimes. It can also help in identifying places where the bodies of victims of war crimes may be buried;

2) *analysis of video and photo materials*. Artificial intelligence can be used to analyze the large amount of video and photo materials that were taken at the scene of war crimes. It can help in the identification of suspects and witnesses, as well as establish whether some objects were depicted that may be of importance to the investigation;

3) *processing of audio materials*. Artificial intelligence can help process audio material, such as phone recordings, that may be important to war crimes investigations. It can help in identifying voices and determining the places where the conversations took place;

4) *analysis of social networks*. Artificial intelligence can help analyze social networks to identify links between suspects and others who may be linked to war crimes. It can also help in the identification of persons who may be witnesses of war crimes or have information about them [2, p. 898];

5) *analysis of data from medical institutions*. Artificial intelligence can help identify the bodies of victims of war crimes, establish the cause of death, identify prisoners of war, war criminals and search for them based on disease data and information on their identifying features;

6) *facial recognition*. Artificial intelligence can be used to recognize faces in photos and videos from war crime scenes. This can help in the identification of suspects involved in the commission of such crimes and the establishment of witnesses who can provide important information about the event under investigation;

7) *analysis of textual information*. Artificial intelligence can be used to analyze textual information, such as messages on social networks and other sources, that may be related to war crimes. It can help identify suspects and witnesses, as well as establish forensically relevant information about war crimes under investigation.

⁹ Jackson C. (2021). Artificial Intelligence Changing the World of Forensics Science. *EasyChair Preprint*, 5815, 3.

Therefore, the use of artificial intelligence can be useful for the effective documentation of war crimes in Ukraine and help identify the perpetrators and bring them to justice for the crimes committed. However, it is worth noting that the use of artificial intelligence in the investigation of war crimes has its own challenges and limitations. One of the challenges is that war creates a situation where it can be difficult to obtain reliable information due to the high unpredictability of the situation on the ground. Also, there is a risk of using AI to harass political opponents or incorrectly display data due to certain algorithmic imperfections. All these factors require careful analysis and planning before using artificial intelligence in documenting war crimes.

Equally important is the connection of using special knowledge when collecting digital traces, determining the possibilities of forensic research, evaluating and using the results of examinations in proving and transforming the competencies of forensic experts from most types of forensic examinations in the age of digital technologies . Currently, objects are submitted for examination in digital form, both on individual data carriers and on computer systems. Therefore, to obtain digital traces legally, it is necessary to use appropriate special knowledge, as well as to conduct a forensic computer-technical examination.

It is believed that the application of artificial intelligence technologies and the process of digitization of forensics is a natural stage of the development and formation of modern criminalistics knowledge, which involves the introduction of digital technologies in various fields of criminalistics science, forensic expertise and legal practice.

In today's realities, it is necessary to update the development of the problems of using digital criminalistics tools in the investigation of crimes. At the same time, special attention should be paid to increasing the role of criminalistic didactics, in particular, criminalistic training of investigators, prosecutors, courts, detectives, forensic investigators, forensic experts in the field of digital technologies. Starting a new profession and training a digital criminologist is relevant today. The modern paradigm of criminalistics should be aimed at the further development and formation of digital criminalistics in order to effectively solve new tasks in the conditions of martial law and processes of digitalization of society. Today, the issue of forming a new field of knowledge – digital criminalistics as a strategic direction of the development of modern criminalistics – has arisen.