Impact Factor: 9.9 ISSN-L: 2544-980X

Using the Potential of Artificial Intelligence in Criminal Process

D. J. Suyunova [1]

Abstract: The article analyzes the current state and the introduction of artificial intelligence (AI) in criminal proceedings, its legal consolidation in the European Ethical Charter (CEPEJ) and the Ethics Guidelines for Trustworthy Artificial Intelligence. The author discusses the use of algorithms in the criminal procedural activities of some foreign countries. The analysis of the study found that it is possible to use new technologies only with the condition of guaranteeing the rights of citizens participating in criminal proceedings. It is concluded that when assessing the evidence collected in the case, the court should check their reliability, taking into account the quality of the image, sound and other factors that may later be relevant to deciding the guilt or innocence of a person. Moreover, the paper substantiates the thesis that the inevitable digitalization of the criminal process should contribute to assisting the judge in organizational and legal activities, ensuring the openness and transparency of justice, guaranteeing the rights and interests of citizens, the rights to protection, simplifying paperwork and speeding up court proceedings. It is impossible to replace a judge with artificial intelligence, since sentencing is related to moral values, professional and everyday experience of a judge, which an automated system cannot provide.

Keywords: criminal proceedings, artificial intelligence, quality of justice, ensuring the rights and freedoms of citizens, sentence, internal conviction.

Introduction

The digital transformation of various spheres of public relations is gaining deeper meaning and intensive development day by day. Undoubtedly, it is impossible to imagine our life without information technology and various electronic devices that greatly improve the quality of life and accelerate various processes. Digital technologies, which are utilized in a wide range of applications in society, are gradually being introduced into the activities of law enforcement agencies. Considering the dynamic changes, there is a vast need to study the impact of the use of digital technologies in criminal proceedings.

One of the types of modern technologies is artificial intelligence (AI), which is being developed and actively implemented in all spheres of everyday life, including the practical activities of a lawyer. The problem of introducing AI into criminal proceedings as a tool to boost trials is widely discussed around the world. But first, you need to understand what “artificial intelligence” is, and what is its role in the future of digital technologies.

The main part.

Artificial intelligence is a unique invention of mankind, which was developed in the middle of the 21st century. For the first time scientific research in the field of artificial intelligence in 1947 was covered in the report "Intelligent machines". The report raised the question of whether a mechanism (machine) can detect reasonable behavior, but this report was not official. Later in 1950, an analysis of artificial intelligence was published in the article "Computing Machines and the Mind", where a test was also developed to compare machine intelligence with human intelligence (Turing 1950).

The term “artificial intelligence” was first introduced in 1956 at a specialized scientific conference and was described as an object “allowing a machine to behave in such a way that it would be considered reasonable if a person behaved in this way” (McCarthy et al. 1955). In fundamental work “What

[1] Professor of the “Criminal Procedural Law” Department at Tashkent State University of Law, Doctor of Law (DSc)

is artificial intelligence?" it is noted that artificial intelligence is "the science and technology of creating intelligent machines, especially intelligent computer programs"(McCarthy 2007).

In Europe, artificial intelligence (AI) is a cyber-physical (non-biological) autonomous system, but in need of physical (energy) support, capable of exchanging data with its environment and analyzing them, self-learning based on acquired experience and interaction, as well as adapting its actions and behavior following environmental conditions (2017).

Despite the huge interest and attention to the development of artificial intelligence objects, to date, no single universal, conventionally recognized definition of the concept of "artificial intelligence" has been developed. As a result, each scientist approaches the definition of this concept in his own way. There is an opinion that "artificial intelligence is the transfer of human capabilities of mental activity into the computer and information technologies, but without the inherent human vices" (Simmler et al.2022)

Some believe that artificial intelligence is "the process of creating machines that are able to act in such a way that they will be perceived by humans as intelligent" (Jones 2011). Another opinion is noted that artificial intelligence is understood as computer programs, software complexes that can not only act according to a predetermined algorithm but also implement such creative functions immanent to people (Lee 2019). In general, based on the above attempts to define the concept of artificial intelligence, it is concluded that artificial intelligence is a technological device or software that, based on the introduced algorithms, is able to independently perceive information, come to a logical conclusion and perform certain functions inherent in the human mind.

Work on the creation of artificial intelligence continued in the 1980s when were the methods of "deep learning" developed "deep learning" methods that allow computers to learn from experience (Hopfield et al.1980). Deep learning is a set of machine learning methods not based on specified algorithms for strictly limited tasks, but on learning about representations (representation/feature learning) that allow you to come to the right decision on your own. This approach has shown such high performance that it has allowed us to surpass human abilities in such actions as pattern recognition and speech, as well as natural speech processing. Deep learning models are capable of processing large amounts of data and are usually performed without the involvement of a teacher or with partial involvement. It was determined that devices with a deep learning method do not need to set instructions in advance for performing a specific function, such devices are able to find the most correct action themselves based on the situation.

The next important stage in the development of artificial intelligence was the development of "expert systems" that simulate human decision-making which in 1994 was awarded the Turing Prize "For pioneering the development and creation of large-scale artificial intelligence systems and demonstrating the practical importance and potential commercial benefits of technologies using artificial intelligence" (Faigenbaum 1993).

Despite the fact that this topic is hotly debated, artificial intelligence in the framework of criminal proceedings has not been sufficiently investigated yet. It can be concluded that there is no specific legislative definition of this concept in the legal community, as well as a professional attitude regarding the need for its application in criminal proceedings.

Artificial Intelligence in Criminal Proceedings.

In this study, we will try to determine how artificial intelligence can influence the administration of justice in criminal proceedings and understand how important and useful it is to use artificial intelligence in the judicial review of criminal cases. Initially, it is necessary to figure out what principles should be followed in order for the use of artificial intelligence in criminal proceedings to be effective and what algorithms of its action should be.

It should be noted that taking into account the inevitable prospect of the introduction of artificial intelligence in criminal proceedings, on December 4, 2018, the Council of Europe at the 31st plenary session (Strasbourg, December 3-4, 2018) adopted the European Ethical Charter

(CEPEJ) (2018) on the Use of Artificial Intelligence in Judicial systems and the Environment, which first of all noted that "the use of artificial intelligence tools and services in judicial systems is aimed at improving the efficiency and quality of justice and deserves encouragement. Nevertheless, this must be done responsibly, with respect for the fundamental human rights set out in the European Convention on Human Rights (ECHR) and the Council of Europe Convention No. 108 on the Protection of Personal Data, as well as other basic principles set out in the Charter."

As a proof of the above mentioned notion, the concept of principles and ethical standards for the use of artificial intelligence in courts, developed by the High-Level Expert Group at the European Commission, presented in the form of Ethics Guidelines for Proper Artificial Intelligence (Ethics Guidelines for Trustworthy Artificial Intelligence) (2018), seems quite attractive. As established by the Management, a trustworthy artificial intelligence should act based on such fundamental principles as legality (strict and unconditional adherence to the law), fairness, ethics (adherence to all norms of ethical values accepted in democratic societies), reliable technological support.

This Manual was used in a pilot mode in the activities of the judicial authorities of some European states, following which a report was prepared on artificial intelligence in criminal proceedings, as well as its use in the activities of investigative bodies and courts (2021). In this Report, a significant position is taken by the provision on the use of artificial intelligence in criminal procedural relations. In particular, it is stated that artificial intelligence provides ample opportunities in the introduction of criminal proceedings, such as improving methods of effective combating some relevant types of crimes in the form of money laundering, financing of terrorism, cybercrime, etc., thereby contributing to the safety of citizens, but at the same time they can entail significant risks. for the basic rights of people.

The Report sets out a list of proposals on the need to adopt a resolution of the European Parliament on the use of artificial intelligence in the administration of justice. One of the important principles for the adoption of the Resolution is that "all artificial intelligence solutions for law enforcement and judicial bodies must fully respect the principles of human dignity, non-discrimination, freedom of movement, presumption of innocence and the right to protection, including the right to silence and freedom of expression and information, freedom of assembly and association, equality before the law, the principle of equality of the parties and the right to an effective remedy and a fair trial in accordance with the Charter and the European Convention on Human Rights". It was also emphasized that "the use of artificial intelligence applications should be prohibited if it is incompatible with fundamental rights."

We believe that these fundamental provisions can be put into the concept of a national system of law enforcement agencies and courts for the use of artificial intelligence in criminal court proceedings. However, following the principles of the Charter, it is important to observe the basic constitutional principles of justice, such as legality, independence of judges and their subordination only to the law, ensuring the right to protection, protection of the rights and interests of persons involved in criminal proceedings, adversarial parties, respect for the honor and dignity of citizens.

Exploring the factors and possibilities of using artificial intelligence in criminal proceedings, I think it is possible to identify some key areas of its application, which will be carried out in strict accordance with the constitutional principles of the administration of justice.

1. The use of artificial intelligence in the exchange of information and its transfer between various bodies – subjects of criminal proceedings will ensure a more prompt and effective resolution of issues related to the resolution of a criminal case. These features will reduce the time to obtain the necessary information in the form of documents or messages. In addition, the functions of automated search and analysis of previously adopted court decisions will allow judges to make the right verdict in accordance with law enforcement practice and legal norms.

2. In accordance with the principle of the Charter on High-quality and Safe Data processing through automatic learning based on certified originals, the use of artificial intelligence should not harm the participants of the process who interact with it in any way. We believe that the artificial intelligence

system should guarantee the ability of a person to control his work on the implementation of rights and interests established by law, and, if necessary, disable functions that do not comply with the rules of judicial activity. It should be noted here the right to access to justice, which can be realized by any citizen using digital technologies, which will provide a person with the opportunity to freely, at his discretion, use the rights and freedoms granted by law (for example, to file petitions, appeal against the actions (inaction) of officials, form and file appeals (cassation) complaints against court decisions) (Swarte et al. 2019) It is an automated approach to the implementation of these rights that will increase the guarantees of citizens' rights and the efficiency of the entire judicial system. It is also assumed that holding court sessions in video conference mode (VCM) should in no way violate the rights of participants in criminal proceedings. The accused should be given the opportunity to communicate with his defender indefinitely, and victims and witnesses should give their testimony in court freely, without any pressure from the organizers of the VCM process. At the same time, ensuring the safety of all participants in the judicial process is a fundamental element of a fair trial.

3. Since the COVID-19 pandemic has proven to us that in using digital technologies, it is necessary to take into account the need to develop a single digital platform for courts with an increased level of channel protection, through which information of persons involved in the case is transmitted, as well as an independent server for storing information on each specific case. It is appropriate to note the specifics of cases where court sessions in offline mode would be held in closed court sessions (crimes against sexual freedom, cases related to state secrets, etc.) since this issue should be regulated separately in the law. It is necessary to guarantee to all participants of the process the rights to protection, both of the accused, and victims, witnesses. As a rule, the defender needs to provide a separate room with an established Internet network or Skype, in order for him to freely communicate with his client in an unlimited period of time. In this context, the accused should also be provided with his right to an objective, the free narration of the events of the crime, since the accused, who is in custody, participates in the court session in the VCM mode in the presence of the staff of the institution for the execution of punishment and is under their supervision.

4. When working with electronic documents (Kanapala et al.2017), legislative protection against unauthorized access and the prevention of changes to their content in documents is required. Digitalization must meet the requirements of criminal proceedings, its features, including those concerning the confidentiality of the testimony of victims, witnesses and other participants in the process.

Thus, it can be concluded that the predominant position of the use of artificial intelligence in criminal proceedings is to optimize the procedural activities of the administration of justice (Greenstein 2022), which will significantly speed up the criminal process with unconditional compliance with the law.

However, in recent years, the legal community has been actively discussing the possibility of using artificial intelligence instead of those responsible for conducting criminal proceedings. Thus, the English scientific publication New Scientist in the publication “How smart is ChatGPT really – and how do we judge intelligence in AIs?” writes that “in modern society there are numerous ideas that within a few years robots equipped with powerful software will replace judges and will be able to make court decisions instead of them which, moreover, will be more impartial and infallible than the sentences passed by living judges. In addition, the robot will need much less time than the judge to study all the available information and make a decision based on it, which will make the trial less protracted and stressful for both parties – the victim and the victim. Supporters of this idea show as a major proof of their assumptions the fact that scientists, based on long-term observations, have proved that a number of subjective factors, such as family relationships, personal state of health, and personal likes or dislikes of the subjects of the trial for various reasons, have a huge impact on the verdicts rendered by the judge. On the other hand, robots are not sensitive to external processes. According to this point of view, the use of artificial intelligence in the legal field represents an undeniable leap into the future” (2016)

In this context, we must once again refer to the Resolution of the European Parliament on the use of artificial Intelligence in the administration of justice (2021) which indicates that "if people rely only on data, profiles, and recommendations created by machines, they will not be able to conduct an independent assessment" and also emphasizes that there may be "potentially serious adverse consequences, especially in the field of law enforcement and justice, when people overly believe in the seemingly objective and scientific nature of artificial intelligence tools and do not take into account the possibility that their results may be incorrect incomplete, inappropriate or discriminatory." It seems correct to mention the Resolution that "in the judicial and law enforcement context, a decision having legal or similar force should always be made by a person who can be responsible for the decisions taken."

As we assume, when considering a criminal case and announcing a sentence, a judge follows the inner conviction, the intuition, that evaluates the evidence collected in the case from the point of view of his experience and knowledge gained throughout his professional career. At the same time, an important role is played by the factors that influenced the perception of a criminal offense, formed in the process of his upbringing, obtaining a legal education, and relations in the family and society. When considering a criminal case in the court proceedings and evaluating the evidence collected in the case, the judge takes into account not only the norms of law but also weighs the pros and cons of any evidence that may affect the passing of a fair sentence.

It seems to us that no complex automated machine can be endowed with feelings of responsibility, compassion, understanding of the current social situation, and even more so, penetrating deep relationships between people (Darling 2012). Moreover, when passing a legally significant sentence, the judge decides the fate of a real living person, taking into account his marital status, the circumstances preceding the commission of the crime, as well as the subsequent conditions of serving the sentence. It seems that modern technologies, no matter how fast they are implemented, cannot be able to replace a judge in his functions for the administration of justice.

It is also necessary to take into account an important stage in the formation of a legal sentence, when a judge, following his inner conviction, must justify his position on the application of certain norms of substantive and procedural legislation. Even considering the fact that the robot will have a huge resource of court decisions that a person cannot keep in memory, it is difficult to imagine the manifestation of the principles of justice, and humanism when a person is found guilty or innocent, sentencing or acquitting him. Naturally, numerous questions arise concerning the judicial practice of considering criminal cases (Hallevy 2010) with the use of artificial intelligence technologies in the future:

will the mechanical judge be able to assess the spiritual suffering and moral harm caused to the victims?

is it possible to mathematically program and train a robot to apply the law and rely on its "inner conviction" (Karnouskos 2021) at the same time?

how will the machine judge interpret the doubts and ambiguities in the case that should be resolved in favor of the defendant?

is there a chance that the robot judge will correctly evaluate the verbal turns, phrases, and language (dialect) of a living person, which can be modified depending on the territory of his residence?

how will the testimony of the participants in the trial be evaluated, which may refer to historical events that are not embedded in the programming of the judge robot?

will the mechanical judge be able to correctly qualify a criminal act?

will the mechanical judge be able to assess the complex relationships of the accomplices of the crime, and the individual role of each criminal, including a minor suspect? (Calo et al. 2016)

will it be correct to assess the legality, validity, and fairness of court sentences a mechanical judge when reviewing court decisions in higher instances, when it is necessary to exhaustively check the arguments of the filed appeals (cassation) complaints?

and, finally, how will the introduction of artificial intelligence into judicial activity affect the formation of the judicial corps, in matters of selection and appointment to the post of judge, is the principle of separation of powers subject to revision, will the legal status of a judge as a representative of fair and humane justice be preserved?

These and other questions regarding the introduction of artificial intelligence in criminal proceedings still call into question the possibility of replacing a judge with artificial intelligence. The specifics of criminal procedural legal relations indicate that only an independent judiciary represented by judges, and not robot machines, is able to make fair judicial decisions and resolve issues related to the guilt of a person, the imposition of punishment or the acquittal of a person unreasonably brought to criminal responsibility, since the moral assessment of the event, the restoration of justice refers to to the sphere of human activity.

However, in many countries that are advanced in terms of technology development, computer programs are being developed that replace or supplement the judge when passing sentence. The use of artificial intelligence technologies is actively spreading in the judicial practice of the USA, China, Great Britain (2018), South Korea (2008), France and Japan (2018).

In 2017, US scientists created an electronic program that allows you to analyze and compare the essence and characteristics of a criminal case together with the decision taken on it. This model, which has US criminal cases in the system for the period from 1816 to 2015, gave a positive result, correctly determining the final verdict of 70.2% of cases out of 28 thousand, and the decisions of individual judges were predicted by the system without errors in 71.9% of cases out of 240 thousand (Katz et al. 2017).

In March 2018, for the first time in history, a full-fledged virtual trial took place in the UK, an interaction which was carried out on the basis of a special closed network developed by order of the Ministry of Justice of the United Kingdom (2021). Today, in this country, artificial intelligence carries out forecasting, the results of which are used by the court when making a decision on the possibility of releasing suspects on bail.

It is impossible not to appreciate the latest technologies of China, which have developed and put into effect a program that allows judges, based on information about punishment in certain criminal cases, to determine the presence or absence of elements of proof, this program offers the optimal type and size of punishment. In addition, the artificial intelligence functioning in the judicial system of China can recognize speech, notice contradictions in testimony, and written protocols and notify the judge about it, and also analyze information about the identity of the defendant and, compare them with the data contained in other sentences, recommends such a punishment that would be imposed by a judge in a similar case (Lee 2019).

In 2018, an experiment was conducted in Argentina within the framework of electronic criminal proceedings, when the judges of a higher court approved all the decisions drawn up by the program using artificial intelligence (Negri 2018).

We consider it appropriate to note that in Uzbekistan, the main directions of artificial intelligence development were defined in the Decree of the President of the Republic of Uzbekistan “On approval of the Digital Uzbekistan - 2030 strategy and measures for its effective implementation” (2020), which provided for the implementation of over 220 priority projects providing for the improvement of the electronic government system, further development of the domestic market of software products and information technologies, organization of IT parks in all regions of the republic, provision of this sphere with qualified personnel. The issue of the implementation of “roadmaps” providing for projects of digital transformation of most of the territory of the state has been positively resolved. The country is gradually providing investigative and judicial bodies with innovative technical means that allow delegating some of the day-to-day technical duties of employees to artificial intelligence technologies.

As for the introduction of artificial intelligence in criminal proceedings, it can be noted that the country has already implemented large-scale tasks to digitalize the activities of courts, improve the quality of legal proceedings and the level of public access to justice, automate the work of courts and systematize information in order to create an effective system of control over timely consideration of cases in courts, ensuring effective interaction courts with bodies of inquiry and preliminary investigation, improvement of information systems and resources to improve the efficiency of office work in courts, expansion of the list and improvement of the quality of interactive services provided to citizens, ensuring information security and secure electronic document management in the court system.

Conclusion.

The study showed that programs for the use of artificial intelligence technologies in criminal proceedings are getting deeper and deeper development, although it is still premature to talk about full automation of judicial activity due to the above-mentioned objective reasons. The current state of the criminal process indicates that digital technologies are rather additional tools that assist judges in ensuring the quality administration of justice, effective protection of the rights and interests of citizens. Of course, the use of artificial intelligence software to free judges from the usual mechanical work, fixing all procedural actions during the trial, recognizing any language in return for the services of an interpreter, will provide invaluable assistance to the judge with the increasing burden of court cases and the need to study a large amount of information, and will also increase the legality and validity of the verdict in strict accordance with the law.

At the same time, the all-round, unlimited digitalization of criminal proceedings, the development and implementation of a programmed robot judge in criminal proceedings can lead to irreversible consequences and judicial errors. A human judge, his mind cannot be replaced by a judge-machine, which only has a program for an accelerated simplified solution to the issue. The fate of a living person who has committed a crime can be decided only by a person - a judge who has extensive professional and life experience, who will be able to analyze the crime that occurred, evaluate the evidence, truthful and false testimony of the participants in the process, determining their reliability. This is the power of the human brain, which can recognize and legally correctly assess the event of a crime, which is unacceptable to artificial intelligence.

REFERENS

1. The CEPEJ European Ethical Charter on the Use of Artificial Intelligence (AI) in Judicial Systems and their Environment dated December 4, 2018. URL: https:// rm.coe.int/presentation-note-en-for-publication-4-december-2018/16808f699d (accessed 22.04.2023)
2. Calo R, Froomkin M, Kerr I (2016) Robot Law. Edward Elgar Publish. https://doi.org/10.4337/9781783476732
3. Darling K (2012) Extending legal rights to social robots. SSRN Electron J. https://doi.org/10.2139/ssrn.2044797
4. Hallevy G (2010) The criminal liability of artificial intelligence entities. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1564096
5. Geenstein S. Preserving the rule of law in the era of artificial intelligence (AI) Artificial Intelligence Review volume. 2022
6. Great Britain. Dept. for Business, Energy and Industrial Strategy. (2018) *Industrial Strategy: Artificial Intelligence Sector Deal*. [Online] Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/702810/180425_BEIS_AI_ Sector_Deal__4_pdf (дата обращения 22.04.2023).
7. Jones M. T. Programming of artificial intelligence in applications. Hardcover-March 20, 2018

8. Kanapala Ambedkar, Sukomal Pal & Rajendra Pamula Text summarization from legal documents: a survey. Artificial Intelligence Review volume 51, pages371–402 (2019)Cite this article
9. Karnouskos S. Symbiosis with artificial intelligence via the prism of law, robots, and society. Artificial Intelligence Review. May 2021
10. Katz, D., Bommarito, I.M. & Blackmann, J. (2017) A general approach for predicting the behavior of the Supreme Court of the United States. *PLOS ONE*. 4 (12). DOI: 10.1371/journal.pone.0174698
11. Lee S, Kim HJ (2008) News keyword extraction for topic tracking. In: Fourth international conference on networked computing and advanced information management, 2008, NCM'08, vol. 2, IEEE, pp 554–559
12. [Law of South Korea on promoting the development and dissemination of smart robots dated March 28, 2008 No. 9014]. Research Centre for Problems of Regulation of Robotics and Artificial Intelligence]. [Online] (Дата обращения 22.04.2023).
13. McCarthy J.et al., A Proposal for the Dartmouth Summer Reseach Project on Artificial Intelligence (31 Agust 1955) //Jerry Karlan (red) Artificial Intelligence: What Everyone Needs to Know. Oxford: Oxford University Press, 2016. Pp.12-14.
14. McCarthy John. What is artificial intelligence? November 12, 2007: Stanford University Press.URL: http://www.formal.stanford.edu/jmc/whatisai/whatisai.html
15. New Scientist. Artificial intelligence could make lawyers more risk-averse. January 27, 2016. URL: https://www.newscientist.com / (accessed 22.04.2023)
16. Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matter / Official website of the European Parliament. URL: https://www.europarl.europa.eu/doceo/document/TA-9-2021-0405_EN.html (дата обращения 22.04.2023)
17. Resolutions of the European Parliament of February 16, 2017 "Norms of civil law on robotics" / URL: http://robopravo.ru/riezoliutsiia_ies (accessed 18.03.2022).
18. Sergio Avila Negri. TRUST IN ROBOTS (pp.229-244) Publisher: TU Wien Academic Press.
19. Shaping Europe's digital future. Ethics guidelines for trustworthy AI/ Official website of the European Union, URL: https://digital-strategy.ec.europa.eu/en/library/.ethics-guidelines-trustworthy-ai (дата обращения 22.04.2023)
20. Swarte T, Boufous O, Escalle P (2019) Artificial intelligence, ethics and human values: the cases of military drones and companion robots. Artificial Life Robot 24(3):291–296. https://doi.org/10.1007/s10015-019-00525-1
21. Turing A. Computing Machinery and Intelligence // Mind, New Series. 1950. Vol. 59, no. 236. P. 433–460.
22. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/702810/180425_BEIS_AI_
https://www.europarl.europa.eu/doceo/document/TA-9-2021-0405_EN.html