

RESEARCH ARTICLE

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# DIGITALIZATION OF CRIMINAL PROCEEDINGS: REALITY AND FUTURE

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## Abstract

The article analyzes the current state of the issue of introducing artificial intelligence into criminal proceedings, its legal codification in the European Ethics Charter (CEPEJ) and the Ethics Guidelines for Trustworthy Artificial Intelligence. The author examines the issues of using algorithms in criminal proceedings in some foreign countries. The work substantiates the thesis that the inevitable digitalization of the criminal process should help assist the judge in organizational and legal activities, ensure openness, transparency of justice, guarantee the rights and interests of citizens, rights to defense, simplify paperwork and speed up trials. It is impossible to replace a judge with artificial intelligence, since sentencing is related to the moral values, professional and everyday experience of the judge, which cannot be provided by an automated system.

**Keywords** criminal proceedings, artificial intelligence, quality of justice, ensuring the rights and freedoms of citizens, sentencing, inner conviction.

## INTRODUCTION

The digital transformation of various spheres of public relations is gaining deeper meaning and intensive development every day. Of course, today it is difficult to imagine our life without information technology and various electronic devices, which greatly improve the quality of life and accelerate various processes. Digital technologies, which have found wide application in society, are gradually being introduced into the activities of law enforcement agencies. Due to the ongoing dynamic changes, there is a need to study the impact of the use of digital technologies in criminal proceedings.

One of the types of modern technologies is artificial intelligence, which is being developed and actively implemented in all spheres of public life, including in the practical activities of a lawyer. The problems of introducing artificial intelligence into criminal proceedings as a tool that speeds up court

proceedings are widely discussed around the world. But first you need to understand what "artificial intelligence" is, what is its role in the digital technology system of the future?

### The main part.

Artificial intelligence is a unique invention of mankind, which was developed in the middle of the XXI century. For the first time, scientific research in the field of artificial intelligence was highlighted by Alan Turing in the report "Intelligent Machines" in 1947. The author was interested in whether a mechanism (machine) can detect intelligent behavior. Later in 1950, he also analyzed artificial intelligence in the article "Computing Machines and the Mind", where he also proposed a test (later named after the author) that allows comparing machine intelligence with human intelligence.

But the founder of the introduction of the term "artificial intelligence" (English – artificial intelligence) is J.McCarthy, who in 1956 at a

specialized scientific conference described it as an object "allowing a machine to behave in such a way that it would be called intelligent if a person behaved in this way" In his fundamental work "What is artificial intelligence?" American computer scientist John McCarthy also notes that artificial intelligence is "the science and technology of creating intelligent machines, especially intelligent computer programs".

In Europe, artificial intelligence (AI) is a cyberphysical (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 in accordance with environmental conditions. .

Despite the great 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.

A.Yu. Afanasyev notes that "artificial intelligence represents the transfer of human capabilities of mental activity into the plane of computer and information technologies, but without human vices» .

M.T. Jones also mentions that artificial intelligence is "the process of creating machines that are capable of acting in such a way that they will be perceived by humans as intelligent» . D. V. Bakhteev points out that artificial intelligence is understood as computer programs, software complexes capable not only of acting according to a predetermined algorithm, but also of implementing such creative functions immanent to man. 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 peculiar to the human mind.

Work on the creation of artificial intelligence continued in the 1980s, when John Hopfield and David Rumelhart developed "deep learning" methods that allow computers to learn from experience. Deep learning is a set of machine learning methods not based on specified algorithms for strictly limited tasks, but based on representation/feature learning, which allows 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 of a teacher. The authors 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, based on the situation, to find the most correct action themselves.

The next important stage in the development of artificial intelligence was the development by Edward Feigenbaum of "expert systems" simulating human decision-making, who 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."

However, to date, artificial intelligence in the framework of criminal proceedings has not been sufficiently investigated, despite the fact that this topic is hotly debated. It can be concluded that in the legal community there is no specific legislative definition of this concept, as well as a professional attitude regarding the need for its application 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. Первоначально следует разобраться, какими принципами нужно руководствоваться, чтобы применение искусственного интеллекта

В уголовном судопроизводстве было эффективным и какими должны быть алгоритмы его действия.

It should be noted that, given the inevitable prospect of introducing artificial intelligence into criminal proceedings, on December 4, 2018, the Council of Europe at its 31st plenary meeting (Strasbourg, December 3-4, 2018) adopted the European Charter of Ethics (CEPEJ) on the use of Artificial Intelligence in Judicial Systems and their Environment, which primarily noted that "the use of Artificial intelligence tools and services in judicial systems are aimed at improving the efficiency and quality of justice and deserve encouragement. Nevertheless, this must be done responsibly, respecting the fundamental human rights set out in the European Convention on Human Rights (ECHR) and 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 confirmation of this, 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 Adequate Artificial Intelligence (Ethics Guidelines for Trustworthy Artificial Intelligence), seems quite attractive. As established by the Management, a trustworthy artificial intelligence should act on the basis of 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, as a result of which a report was prepared on artificial intelligence in criminal proceedings, as well as its use in the activities of investigative and judicial authorities. 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 broad opportunities in the implementation 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 authorities 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 is 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 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.

Examining the factors and possibilities of using artificial intelligence in criminal proceedings, it seems 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 authorities (participants in criminal proceedings

conducting 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 required 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 correct 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 participants in the process who interact with it in any way. We believe that the artificial intelligence system should ensure that a person can control his work on the realization of the 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 provided by law (for example, to file petitions, appeal against the actions (inaction) of officials, form and file appeals (cassation) complaints against court decisions). 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 videoconference mode (videoconferencing) should in no way violate the rights of participants in criminal proceedings. The accused should be given the opportunity to communicate with his lawyer indefinitely, victims and witnesses should give their testimony in court freely, without any pressure from the organizers of the VKS process. At the same time, ensuring the safety of all participants in criminal proceedings is a fundamental element of a fair trial.

3. As the COVID-19 pandemic has shown us, when 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

from 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 in which court sessions in offline mode would be held in closed court sessions (crimes against sexual freedom, in cases related to state and other legally protected secrets, etc.), since this issue should be regulated separately in the law. All participants in the process should be guaranteed the right to protection, both for the accused and for victims and witnesses. As a rule, the defender needs to provide a separate room with an established Internet connection (Skype, etc.), 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, free presentation of the circumstances of the crime event, since the accused, who is in custody, participates in the court session in the VKS mode in the presence of employees of the penitentiary institution and is under their supervision.

When working with electronic documents, legislative protection against unauthorized access and the prevention of changes to their contents in documents is required.

Digitalization must meet the requirements of criminal proceedings, its peculiarities, including those relating to 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 bodies for the administration of justice, which will significantly speed up the criminal process while unconditionally observing the norms of the law and ensuring procedural guarantees of individual rights. Однако в последние годы в юридическом сообществе активно обсуждаются возможности использования искусственного интеллекта вместо лиц, ответственных за производство по уголовному делу.

So, 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 error-free than the sentences handed down 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 defendant. The main proof of the correctness of their assumptions, proponents of this idea call the fact that scientists, based on long-term observations, have proved that a number of subjective factors, such as his family relationships, personal health status, personal likes or dislikes to the subjects of the trial for various reasons, have a huge impact on the verdicts rendered by the judge. 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».

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, 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 a 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."

It seems that when considering a criminal case and passing a sentence, the judge follows his inner conviction, his intuition, he evaluates the evidence collected in the case from the point of view of his experience and knowledge gained throughout his professional career, guided by the law and

conscience. In addition, factors that influenced the perception of a criminal offense, formed in the process of his upbringing, obtaining legal education, family and social relations, have an important role. When considering a criminal case in court 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 imposition of a fair sentence.

It seems that no complex automated machine can be endowed with feelings of responsibility, compassion, understanding of the current social situation, and even more so, penetrate into deep relationships between people. Moreover, when passing a 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, will not be able to replace a judge in the exercise of his procedural function in the administration of justice.

It is also necessary to take into account an important stage in the formation of a lawful sentence, when a judge, following his inner conviction, must justify his position on the application of certain norms of substantive and procedural criminal law. Even considering the fact that the robot will have a huge resource of judicial 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 regarding the judicial practice of considering criminal cases with the use of artificial intelligence technologies in the future:

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

is it possible to mathematically program and train a robot to apply the law and rely on its "inner conviction", which should be based not only on knowledge of the law, but also on conscience, which the robot does not have?

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, 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 robot judge?

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

will the robot judge be able to assess the complex relationships of the accomplices of the crime, the individual role of each criminal, including a minor suspect?

will the robot judge correctly assess the legality, validity, and fairness of court sentences when reviewing court decisions in higher instances, when the arguments of the filed appeals (cassation) complaints should be exhaustively checked?

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 into criminal proceedings still cast doubt on the possibility of replacing a judge with artificial intelligence. The specifics of criminal procedural 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, sentencing him or acquitting a person unreasonably prosecuted, since the moral assessment of the event, the restoration of justice refers to the sphere of human activity.

However, in many advanced technology countries, computer programs are being developed that

replace or complement the judge in sentencing. The use of artificial intelligence technologies is actively spreading in the judicial practice of the United States, China, and the United Kingdom , South Korea, France, Japan .

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 the 28 thousand cases, and the decisions of individual judges were predicted by the system without errors in 71.9% of the 240 thousand cases.

In March 2018, for the first time in history, a full-fledged virtual trial took place in the UK, interaction in which was carried out on the basis of a special closed network developed by order of the Ministry of Justice of the United Kingdom. Today, in this country, artificial intelligence carries out forecasting, the results of which are used by the court in 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 operating in the Chinese judicial system can recognize speech, notice contradictions in testimony, written protocols and notify the judge about it, and also analyzes information about the identity of the defendant and, comparing them with data contained in other sentences, recommends such a punishment that would be imposed by a judge in a similar case .

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 .

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", 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 area 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 authorities 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 into 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 control system for timely consideration of cases in courts, ensure effective interaction courts with bodies of inquiry and preliminary investigation, improvement of information systems and resources, ensuring an increase in the efficiency of office work in courts, expanding the list and improving 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 becoming more and more deeply developed, although it is still premature to talk about full automation of judicial activities 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 high-quality administration of justice and effective protection of the rights and interests of citizens. Of course, the use of artificial intelligence software to free judges from ordinary mechanical work, record all procedural actions during the trial, introduce an audio protocol of the court session, recognize any language in return for the services of an interpreter, will provide the judge with invaluable assistance with the increasing workload of court cases and the need to study a large amount of information, as well as 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 machine judge, which only has a program for an accelerated simplified solution of the issue. The fate of a living person who committed a crime can be decided only by a human judge who has the necessary professional and life experience, who will be able to analyze the crime that occurred, evaluate evidence, truthful and false testimony of participants in the process, determining their reliability. This is the power of the human mind, which can recognize and legally correctly assess the event of a crime, which is inaccessible to artificial intelligence.

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