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Use of AI Technologies in Dispute Resolution at the Pre-Trial Stage and in Court Proceedings

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Abstract: Considering the orientation of the sphere of legal proceedings, the processes of digitalization and intellectualization create new difficulties for the subjects of procedural decision-making, which is based on the factor of doubt. Doubt allows filtering out disputable information or initiating further information search. The use of AI in legal procedures adds an element of doubt to their effectiveness: a decision maker aiming to resolve a dispute may accept the AI system's suggestion or only consider it, which implies further verification. The study analyzes the directions and problematic points related to the integration of AI technology in judicial and expert activities of the Russian Federation and the People's Republic of China, including the problems of presenting the output in the interface, the limits of error tolerance, AI independence, etc.

Keywords: Artificial intelligence. Litigation. Efficiency. Doubt. Decision.

I Introduction

Any technology that does not appear magical is insufficiently advanced.[1]

Gregory Benford[2]

[1] Gregory Benford. Foundation's Fear. Harper Prism, 1997.

[2] Gregory Benford (born January 30, 1941) is an American science fiction author and astrophysicist who is professor emeritus at the department of physics and astronomy at the University of California, Irvine.

The sphere of legal proceedings is ideologically designed to resolve disputes between individuals regarding the differentiation of their personal and mutual rights and obligations. While in civil proceedings each party has relatively equal opportunities to present its position, in the criminal proceedings of most countries of our planet the position of state authorities is the priority. Law enforcement officers and court officials, being human beings, are not without doubts and, due to cognitive biases, can make mistakes that can lead to serious consequences for society and individuals.

We consider two separate but related consequences of scientific and technological progress, which can reduce the negative impact of these subjective factors. First, it is digitalization, which in the context of legal activity mainly ensures the speed of transmission of documented information, as well as the possibility of its verification, including the establishment of the source of origin of the document and the persons involved in its creation. Secondly, over the last 15 years a number of technological solutions related to machine learning based on big data have emerged, which has so far led to scientific and practical discussions about the potential and limits of using intelligent systems in different fields of activity, including legal activity. These processes can be referred to as intellectualization. If the digitalization of jurisprudence is more focused on the document flow, i.e. the material environment of information carriers, intellectualization is aimed at human cognitive activity, the process of information evaluation and decision-making. If the errors and distortions resulting from digitalization most often lead to red tape and slow bureaucratic processes, then similar phenomena of intellectualization will inherently overlap with the process of making legally significant decisions, and therefore such processes require both legal, scientific and practical understanding.

Active introduction of digital technologies into all spheres of life is a modern global trend. Information systems, diverse in their application and purpose, have become an integral part of our daily life, and therefore, the digital transformation of even such a traditionally conservative area of legal relations as judicial proceedings has become inevitable.

The declaration of the principles of freedom of information, the commitment of the judicial community to the policy of information openness, as well as the support of the concept of creating a unified information space of the justice system have opened up opportunities for the introduction of the latest technologies, including artificial intelligence (hereinafter – AI) technologies, into the sphere of legal proceedings and alternative dispute resolution mechanisms.[3] Therefore,

[3] Alexander V. Macutchev, 'Modern possibilities and limits of artificial intelligence introduction into the system' (2022) 8 Actual problems of Russian law p. 47-58. DOI 10.17803/1994-1471.2022.141.8.047-058.

AI systems have become widespread in law enforcement practice, which aim to support decision-making and complement human skills in computer-assisted knowledge management; help decision-makers improve their performance, while decision-making tools automate these processes.[4]

At the same time, with the development of artificial intelligence, the prospect of further introduction into law enforcement practice of technologies that attempt to solve their tasks by emulating the cognitive, intellectual activity of a human becomes obvious. Despite the fact that these technologies have been applied in the field of judicial proceedings relatively recently, the effectiveness of their application already allows us to give them a positive assessment.

The application in digital systems of artificial intelligence methods such as heuristic search, natural language sentence recognition, knowledge representation, and logical inference has so far reduced the role of human beings in the work process and increased the efficiency, speed and sustainability of the justice system.

Modern court proceedings are a good example of skillful combination of advanced technical achievements with traditional rules of justice administration. Intelligent systems ensure the transparency, accessibility and predictability of legal proceedings, reduce their time and cost, resolve situations of judicial uncertainty and unify judicial practice, while preserving the creativity of the administration of justice.

AI systems are capable of performing simple (including analytical) operations faster and more accurately than humans, without losing concentration when performing monotonous and routine work. The introduction of AI systems should help to increase the quantitative characteristics of court proceedings: increase the speed of procedural communication in general and the speed of consideration of each specific case, the number of cases considered, as well as the time that the law enforcer will be able to spend on solving creative problems.[5]

II The Doubt Factor in Resolving Controversies

Doubt in philosophy represents the initial beginning of the apprehension of certainty.[6] It is necessary to distinguish doubt for the sake of doubt (for example, doubt of solipsism – denial of the existence of the objective world external to

[4] Lodder A., Zeleznikow J., 'Artificial Intelligence and Online Dispute Resolution'. In Wahab M, Katsh E, Rainey D, editors, Online Dispute Resolution: Theory and Practice. Den Haag: Eleven Publishers. 2012. p. 61-82.

[5] Andrew V. Neznamov, 'Using artificial intelligence at legal proceedings: first experiences and first conclusions' (2020) 3 Russian Law: Education, Practice, Science. p. 32-39. DOI 10.34076/2410-2709-2020-32-39.

[6] Ludwig Wittgenstein, On Certainty. Blackwell, 1969. –180 pages

man), from doubt, which fulfills the function of the criterion of truth, the method of differentiating it from delusions, illusions and deceptions. In legal science, this concept is characterized as an aspect opposite to subjective reliability, i.e. personal confidence of the subject in the truth of a certain evidence. Doubt is designed to strengthen, emphasize the shortcomings in the understanding of the available facts and defects in the decisions made, thus it expands the possibilities for their additional verification and support, increasing the evidentiary value of case materials, it can be defined as a concept located in the area of contradiction between knowledge and ignorance, contradiction and agreement, and performs the role of the main filter or tool when working with the data underlying the decision-making in the detection and investigation of crime.

Another important function of doubt in any practical activity, and especially when working with evidentiary information, is that it is a tool for switching from "fast" to "slow" thinking. Insufficient doubt (overconfidence) can cause certain cognitive distortions that increase the probability of mistake.

We adhere to the position according to which it is doubt that is the driving force of the entire course of investigation, including at the pre-trial stages. All actions taken by the subject of law enforcement can be conditionally divided into two categories: those aimed at obtaining fundamentally new information and those aimed at verification. Thus, most decisions of the law enforcer have a dual structure: either the opportunity to obtain previously unknown information is realized, or to verify certain facts (to find out the involvement of the suspect in the event of the crime, to check the alibi, to determine the actual relationship of the witness to the suspect, etc.). The present research is aimed at studying the second group of tasks in the context of the possibility of integrating AI systems into their solution.

It is obvious that the need to obtain initial information and the subsequent growth of knowledge derived from them to such a qualitative and quantitative level, which would allow planning the course of further investigation, is due to its formal nature, since each subsequent decision of the investigator is determined by the data obtained at the previous stage of forensic cognition. What induces the investigator to develop an array of useful information until it acquires, in the professional opinion of the subject of forensic cognition, the qualities of reliability and sufficiency? It seems that it is doubt that fulfills the described stimulating function.

For example, distrust in the testimony of one witness with simultaneous confidence in the words of another will be a good reason for a confrontation. This action is aimed at eliminating the existing discrepancies in the testimony of previously questioned persons, that is, it is mostly a certifying operation, although in the process it is not excluded (and even highly desirable) the possibility of

obtaining new information. The decision to conduct a confrontation is made by the investigator on the basis of identified contradictions, which can be understood as doubts about the reliability of any evidence or its fragment. A discrepancy can be considered significant when it prevents the correct and consistent assessment of evidentiary facts and directly relates to the subject of proof.

The role of doubt in identifying and resolving a contradiction is summarized as follows:

1. It activates the principle of negation of contradiction, according to which, if there are two or more judgments, at least one of them should be questioned (and it is not excluded that the third, unknown at this stage, will turn out to be true when choosing from two variants). In some cases it is methodologically correct to consider all such judgments as untrustworthy until the contrary is proved.
2. Psychologically, doubt acts as an initiating factor that encourages the investigator to make every effort to eliminate it and thereby improve the quality of the remaining evidence after such filtering.

To achieve the reliability described above, it is necessary to identify and eliminate all possible contradictions in the evidentiary model. In the presence of irremovable doubts about the truth of facts, an official (investigator, forensic expert, prosecutor, judge) must refuse to use them in procedural documents. Therefore, either the slightest uncertainty in the reliability of materials is eliminated by means of appropriate verification, or the flawed evidence is excluded from the array of data designed to confirm the position of the person.

There are two main forms in which doubt about the reliability of a piece of evidence may manifest itself:[7]

1. Doubt in the source of evidence. Thus, the results of numerous surveys of investigators, conducted by the author of this paper and other scholars, demonstrate that the greatest confidence of investigators is caused by the results of forensic examinations, rather than information obtained from citizens (witnesses, victims), for example. At the same time, practice shows that the testimony of the latter is often false or dishonest. From the above we can conclude that the increase in the probability of inconsistency of information with reality, with necessity entails an increase in distrust of the investigator to the source of such evidence. It should also be borne in mind that the probability of unreliable testimony directly depends on the goals and interests of the person concerned,

[7] Dmitry V. Bakhteev, 'Category of doubt in the investigation process as a factor of achieving fair and sufficient facts of evidence' (2014) 5 Criminalist's Library: scientific journal p. 110–113.

the possibility of determining which is determined, among other things, by the reflexive capabilities of the investigator, including his skills in interpreting verbal and non-verbal signals received, for example, during interrogation. If false or dishonestly provided information is identified, it should be excluded from the evidentiary base.

2. The next not less significant variant presupposes doubt arising from the comparison of facts with each other. In this case we can talk about the presence of two or more evidences with contradictory content. Moreover, such inconsistency may entail falsification of all disputed data. The elimination of doubt here is possible by obtaining new evidence that confirms one of the contradictory ones, or through a deeper evaluation of them, consisting in comparison with a greater number of other information available to the investigation.

Thus, we can conclude that doubt is directly related to the elimination of false or inaccurate evidentiary facts and, as a result, to the improvement of the quality of evidentiary information.

The second property of forensic knowledge – sufficiency – is also, although to a lesser extent, related to doubt. Without refuting the opinion that this characteristic of evidence is finally established by the judge, we still consider the assessment of the totality of certifying facts for their compliance with the criterion of sufficiency as an operation that permeates all stages of the process, including preliminary ones. We find confirmation of this position even in the legislative requirement to ensure the existence of sufficient grounds for bringing charges. In order to move the investigation forward and increase the level of evidence, the subject of investigation must doubt the sufficiency of the collected materials. If this is not the case, then there are two possibilities: either the investigation was carried out with the highest quality and there are no gaps in its information structure, or the investigator lacks experience to adequately assess the situation. That is, the fact of doubt acts as a kind of filter of sufficiency in the process of investigation.

From all of the above, the usefulness of doubt as a method of eliminating contradictions in legal proceedings becomes obvious. However, it can also have a negative impact on the investigation process. Doubt often represents not only and not so much a critical assessment of the current situation or evidence obtained, but also the impossibility of overcoming the existing difficulties, thus it acts as an indirect sign of a difficult situation of investigation, while not always contributing to its resolution. For example, doubt in the need to appoint resource-intensive expertise, which the investigator tries to overcome by obtaining additional evidence, can lead to tactical risk or organizational disorder.

We propose to consider doubt in judicial proceedings according to the model proposed by N. N. Taleb as «a hard lever of interaction between antiskepticism and fallibilism, i.e. between two extremes – 'what to doubt' and 'what to accept'».[8] That is, reaching a conclusion «beyond a reasonable doubt» requires engaging doubt to filter out the inevitable contradictions in legal proceedings.

Modern systems based on machine learning technology provide the forensic expert, judge and other participants in legal proceedings with additional opportunities to verify information, but the question should be asked: are intelligent technologies a tool for creating or eliminating doubts when resolving contradictions? We believe that this criterion should be the basis for the application of intelligent systems in law enforcement: developing the idea stated in the introduction, if digitalization is designed to simplify and speed up processes in human activity, i.e. to lead to quantitative improvements, then intellectualization should ensure more effective, i.e. less contradictory actions of human law enforcement.

III Decision Support Systems in Expert Activity

An artificial intelligence system can act as a source of information (for example, when monitoring and detecting open or partially open sources on the Internet), or as a means of processing and filtering information (for example, when analyzing mail server logs), or as a system for forming or supporting expert decisions when investigating a controversial situation. In all of these cases, preliminary empirical confirmation of the effectiveness and reliability of such systems is required. Despite the seemingly obvious prospects, the technology in question is not without significant drawbacks (including lack of transparency), so the practical implementation of such systems requires consolidated work of both law enforcement officers and private organizations, as well as scientists. Understanding the technology of functioning of artificial intelligence systems, the principles of accumulation and use of big data, which accompany (visibly and invisibly) any human activity, including investigative activity, can open new opportunities in detection and resolving controversial situations.

Implementation of artificial intelligence in can be realized in the following areas:

– provision of expert evaluations within the framework of forensic examination (application of artificial intelligence in expert legal systems, automated systems for support of legal decisions based on artificial intelligence, other expert systems);

[8] Nassim Nicholas Taleb, 'The Black Swan' 545 (2019)

- increasing the efficiency of certain areas of forensic expert research through computer vision technology: first of all, trace and habitoscopic, as well as document research – detecting signs of forgery of handwriting or other document details, recognizing the appearance of a person depicted in a photograph or video recording, eliminating noise or interference in the analysis of phonograms, etc. Tasks of this type can be solved by traditional software complexes, but the use of artificial intelligence systems can reduce the level of false positive or false negative results in expert research, and certain steps in automation and introduction of intelligent systems in expert activity are already being taken;
- search for computer files inaccessible to traditional software, hidden, for example, by steganography or alternative data streams (ADS),[9] establishing the primary source of information on the Internet during the production of computer-technical research;
- identification of facts of possible abuse of law, falsification of examined objects and expert opinions;
- facilitating decision-making in large cases, based on inaccurate, insufficient or poorly defined information, requiring large amounts of specific knowledge.

The interaction between a forensic expert and an AI system can be described as follows: an interested subject submits an array of information to the input of an artificial intelligent system; the system, trained on similar materials, processes the request and issues a decision; a person receives the system's decision and, based on it, organizes its further activity. Let us consider this on the example of the functioning of the intellectual system developed at the Department of Criminalistics of the Ural State Law University named after V. F. Yakovlev, «SigVer», designed to detect handwritten signature forgery.[10] The functionality of the application implies that the user uploads to the program the photos of the original and the disputed signature. The photos are processed: strokes are differentiated from the background, pressure is determined by the intensity of the strokes, etc. After that, when you click on the «compare» button, the system gives its evaluation based on the results of comparing the signature images. This system has the function of specifically supporting human decision making, not making the decision for the human. In this place there is already a bottle neck: two boundary groups of scenarios are possible in which a person using such an application can either fully

[9] Ryan M. Harris, Using artificial neural networks for forensic file type identification: Master's Thesis (West Lafayette, Indiana: Purdue University, 2007).

[10] Dmitry V. Bakhteev and Roman O. Sudarikov, 'NSP dataset and offline signature verification' (2020) 1266 Communications in Computer and Information Science. DOI 10.1007/978-3-030-58793-2_4.

rely on the result of such a system's work and mindlessly trust it, or, on the contrary, ignore its decisions. At the same time, intermediate variants, according to which an expert checks the solution of an AI system using «classical» handwriting methods, in fact, make the whole project meaningless: if a person has to check the solution of the system, spending his own time and energy on it, is the intellectualization of this activity so necessary?

The form of this assessment affects the human perception of the intellectual system's decision. The result of AI work in this and other projects on intellectualization of expert activity can be presented as a text of the expert's conclusion (we believe that in this case there is a substitution of the decision, not the work of an intellectual assistant), quantitative data, for example, in percentages, graphical expression of data, for example, in the form of a gradient color scale, where bright red is a reliable forged signature, white – corresponds to an uncertain conclusion in expert conclusions, bright green – a reliable original signature. The exact probability value and textual response of the system are not available in this case, which reduces the degree of influence on the human decision, but this method is not intuitive.

In addition, for the use of AI systems in forensic examination, it is necessary to solve the issues of legislative fixation of the legal status of such systems, the grounds for their use and the definition of «permissible mistakes rate», beyond which it is necessary to involve a human expert.

IV Decision Support Systems in Judicial Activities

The scientific literature is represented by a variety of opinions of researchers about the directions in which the use of intelligent systems in the field of judicial proceedings is possible.

Summarizing, let us highlight the key, most developed directions of the use of artificial intelligence technologies in legal proceedings of various legal systems.

1. Use of AI as *an aid to the progress of legal proceedings*.

Use in the office management system to optimize and perform such functions as sorting papers, creating files and subpoenas, printing copies, preparing and sending correspondence, searching for files to attach new documents, creating documents according to a template, correspondence with other government agencies

without human intervention;[11] recording of court proceedings;[12] [13] professional legal translation in court proceedings,[14] which will reduce the time required to process a case by eliminating the need for an interpreter; statistical reporting;[15] transcription of audio protocols of court hearings, identification of individuals in court hearings using biometric technologies.[16] It is also possible to automatically determine the specialization of judges by categories of cases and the distribution of cases among judges taking into account their workload, work schedule, specifics of the case and other criteria.[17]

2. Use of intelligent judicial decision support systems as *an auxiliary tool not directly related to the case resolution function.*

Automated systems for analyzing and interpreting legal norms; the use of AI to conduct expert examinations of legal acts; information and analytical support through the creation of an electronic courtroom with an AI judge, an AI advisor to the judge,[18] [19] or a companion judge to a human judge, including on the evaluation of a range of evidence.[20]

The advantage of using artificial intelligence technologies as an assistant (partner) of a judge is the ability to very quickly analyze, compare, process significant arrays of normative legal material and existing judicial practice, which a person can often miss, to prepare the necessary drafts of court documents.[21]

11 Dmitry V. Bakhteev and Lyudmila V. Tarasova, 'The application of artificial intelligence in commercial courts of the Russian Federation: perspectives and issues' (2021) 26 Vestnik of Kostroma State University p. 249-254. DOI 10.34216/1998-0817-2020-26-4-249-254.

12 Vasily Laptev, 'Artificial intelligence in court: how it will work' available at https://pravo.ru/opinion/232129/ (last visited on October 10, 2023).

13 Victor I. Kachalov, Oksana V. Kachalova, E. Elena V. Markovicheva, 'Possibilities of using information technologies when making procedural decisions by the court in a criminal case' (2022) 477 Bulletin of Tomsk State University p. 222-229.

14 Peter M. Morhat, 'Possibilities, peculiarities and conditions of application of use of artificial intelligence in the legal practice' (2018) 2 Court Administrator. p. 8-12.

15 Poskryakov R., 'The use of artificial intelligence in judicial work' (2019) 16 Ogaryov-Online. p. 2.

16 Victor V. Momotov, 'Judicial Proceedings in Russia in the Context of New Digital Technologies' (2023) The materials of the International Scientific and Practical Conference 'ARTIFICIAL INTELLIGENCE AND BIG DATA IN THE JUDICIARY AND LAW ENFORCEMENT: REALITIES AND NEEDS'. p. 267-271.

17 Poskryakov R., 'The use of artificial intelligence in judicial work' (2019) 16 Ogaryov-Online. p. 2.

18 Dmitry V. Bakhteev and Lyudmila V. Tarasova, 'The application of artificial intelligence in commercial courts of the Russian Federation: perspectives and issues' (2021) 26 Vestnik of Kostroma State University p. 249-254. DOI 10.34216/1998-0817-2020-26-4-249-254.

19 Peter M. Morhat, 'Possibilities, peculiarities and conditions of application of use of artificial intelligence in the legal practice' (2018) 2 Court Administrator. p. 8-12.

20 Vasily Laptev, 'Artificial intelligence in court: how it will work' available at https://pravo.ru/opinion/232129/ (last visited on October 10, 2023).

21 Oleg A. Stepanov, Denis A. Basangov, 'On the prospects for the impact of artificial intelligence on judicial proceedings' (2022) 475 Bulletin of Tomsk State University. p. 229-237. DOI 10.17223/15617793/475/28.

Administer the issuance of digital writs of execution and follow up on their legal fate omitting, prepare necessary drafts of court documents.[22]

Performing the functions of evaluating the evidence presented in the case: determining the category and legal properties of the transaction (form, date, authenticity of electronic signature); checking the calculation of claims (amount of penalty, real damage or lost profits); determining the omission of the limitation period and the term for appeal to the court; proposing reconciliation of the parties (options for amicable agreements or the prospects of using mediation procedures); calculating «deepfakes» using AI and other falsifications

Examination of procedural documents received by the court in order to identify their non-compliance with the requirements of procedural legislation. The use of decision support systems by the court as a system of sentencing in criminal proceedings. Analysis and systematization of court practice.[23]

3. Taking into account the high transformative potential of AI systems with regard to processing and analyzing a large array of data, we consider reasonable the proposals to introduce in the distant future in court proceedings *artificial intelligence technologies as expert systems that do not replace the judge*. Expert systems assume that artificial intelligence can not only summarize data, analyze the situation and identify possible options for applying the law, but also develop a draft decision for consideration by a judge.[24] [25]

Such systems are able to perform automated research of judicial acts to develop solutions to various legal problems by accessing and examining relevant databases and evaluating them, for example, where the facts are undisputed, the applicable law is clear, and similar precedents are known.[26]

It is relevant to use expert systems for drafting judicial acts on the basis of analyzing the text of the procedural appeal and materials of the court case, on undisputed claims, where decision-making is not associated with the analysis of legal relations of the parties and to a greater extent has a technical nature. For example, in writ proceedings when considering civil or administrative cases.

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22 Vasily Laptev, 'Artificial intelligence in court: how it will work' available at https://pravo.ru/opinion/232129/ (last visited on October 10, 2023).

23 Victor V. Momotov, 'Prospects for the use of artificial intelligence in the judicial system of the Russian Federation' available at http://www.ssrf.ru/news/lienta-novostiei/36912 (last visited on October 15, 2023).

24 Dmitry V. Bakhteev and Lyudmila V. Tarasova, 'The application of artificial intelligence in commercial courts of the Russian Federation: perspectives and issues' (2021) 26 Vestnik of Kostroma State University p. 249-254. DOI 10.34216/1998-0817-2020-26-4-249-254.

25 Oleg A. Stepanov, Denis A. Basangov, 'On the prospects for the impact of artificial intelligence on judicial proceedings' (2022) 475 Bulletin of Tomsk State University. p. 229-237. DOI 10.17223/15617793/475/28.

26 Peter M. Morhat, 'Use of artificial intelligence in the administration of justice as a way of overcoming judicial discretion' (2018) 5 Law and State: Theory and Practice. p. 6-11.

According to V.V. Momotov, it seems reasonable to study the possibility of applying such algorithms to simple similar disputes with a «template» plot, the resolution of which also does not require a comprehensive and thorough study of the evidence collected in the case.[27]

Here we can provide an example of the Russian Superservice «Justice Online», which represents the basis of digital justice and is planned to be launched in 2024. The Superservice implies the possibility not only to participate in court proceedings remotely through the public services portal, including filing documents with courts of all levels, remote access to case materials, and receiving court decisions in a personal account, but also the possibility of automated drafting of court acts using artificial intelligence technologies based on the analysis of the text of the procedural appeal and court case materials.

It should be noted that the use of expert systems does not mean transferring the functions of administration of justice from a human to a computer, but only providing AI with analytical tools that will allow to predict future decisions and create their layout by analogy with those analyzed by the expert system, which will increase their objectivity and validity and minimize errors in the actions of judges.

Without infringing on the fundamental basis of the administration of justice – judicial discretion, which implies the possibility for a judge to choose the most appropriate option to solve a case on the basis of his or her inner conviction – artificial intelligence will be able to guide the judge to choose the best alternative among all possible solutions, taking into account the analysis of practice.

This technology, with its ability to assess the prospects for resolving a legal dispute, taking into account current practice and the actual circumstances of the case, would also be useful for litigants, as it could provide recommendations on alternative methods of dispute resolution and the prospects for pre-trial settlement.

Technological solutions could help potential litigants to get an idea of the most likely outcome of a future dispute, the timing of its resolution and the amount of legal costs, thus encouraging parties not to take the conflict to extremes and preventing the initiation of disputes doomed to failure.

Expert systems have a number of undeniable advantages over humans. Having a heuristic search algorithm, the ability to accumulate information and experience, AI systems have a large knowledge base, which, once entered into the machine, is retained forever. A human has a limited knowledge base, and if the data are not used for a long time, they are forgotten and lost forever.

[27] Victor V. Momotov, 'Judicial Proceedings in Russia in the Context of New Digital Technologies' (2023) The materials of the International Scientific and Practical Conference «Artificial intelligence and big data in the judiciary and law enforcement: realities and needs». p. 267-271.

Expert systems are resistant to external influence, they have no biases, they do not make hasty conclusions, as their activities are based on knowledge, while a person is easily influenced by external factors that are not directly related to the task at hand.

Artificial intelligence algorithms can eliminate human bias in judicial decision-making, thereby improving the quality of the decisions made.[28]

These systems cannot replace human beings in solving tasks, but rather resemble tools that enable them to solve tasks faster and more efficiently, being a tool in their hands.[29]

V Practical Application of AI Technologies in Judicial Proceedings in the Russian Federation and the People's Republic of China

It seems most interesting to analyze and take into account practical experience in the application of artificial intelligence systems in the sphere of judicial proceedings to consider the legal systems of Russia and China.

In the Russian Federation, within the framework of the Federal Target Program «Development of the judicial system of Russia for 2013-2024», a high level of implementation of measures to create e-justice and electronic document flow has been achieved, the possibility of data storage on cloud servers has been provided, which has opened new opportunities for the introduction of more sophisticated artificial intelligence technologies into the formed digital judicial environment.

The activities of federal courts of general jurisdiction in the Russian Federation are supported by the State automated system «Justice». Arbitration courts use a complex of integrated software and hardware, including systems for the automation of court proceedings, the information systems «My Arbitrator», «Arbitration Case File» and «Arbitration Court Decision Bank». These automated information systems ensure electronic document flow in criminal, civil, arbitration proceedings and administrative proceedings, forming a unified information space of federal courts of general jurisdiction and arbitration courts, as well as the use of electronic documents as evidence.

On December 5, 2019, the Council of Judges of the Russian Federation approved the Concept of Information Policy of the Judicial System for 2020-2030, according to which the prospects for the use of artificial intelligence in court

[28] S. Yassine, M. Esghir, and O. Ibrihich, 'Using Artificial Intelligence Tools in the Judicial Domain and the Evaluation of their Impact on the Prediction of Judgments' (2023) 220 Procedia Comput. Sci. p. 1021-1026. https://doi.org/10.1016/j.procs.2023.03.1422023.

[29] Drzhevetsky Y., 'Expert systems as an Applied Field of Artificial Intelligence' (2011) 1 Proceedings of the International Symposium 'Reliability and Quality'. p.152-154.

proceedings may be associated with the release of judges from technical and legal monotonous, uncomplicated work, which, according to experts' estimates, takes up to 80% of judges' working time.

At the moment in the Russian Federation there are technical and technological prerequisites for the active application of weak artificial intelligence capable of solving highly specialized tasks. At the same time, it should be noted that the issues of application of artificial intelligence systems by the judiciary have not received sufficient legal regulation in connection with which, in the activities of state bodies, including the judiciary, do not apply systems of fully automatic decision-making.

At the end of 2018, specialists of the Department of Theory and History of State and Law of Perm State Research University developed a program of information-technological support of judicial decision-making «Laser». The presented demo of the working version of «Laser» allowed to make sure of the real possibility of implementing the program for generating judicial acts.

With the help of the algorithm, judges will «move» strictly through the stages of the trial, will be able to consistently record the course of the trial and record the arguments of both sides. As a result, the program will create the text of a reasoned decision, thus helping judges to formulate the reasoning part of the judicial act faster and more accurately.

The working version of the program shows that the automation of legal activities in the planned direction will not lead to the rejection of the essential features of justice, but will seriously accelerate the production of a reasoned judicial act through the use of information technology. The legal part of the work in this direction consists in determining the sequence of options arising before the judge in the process of deciding cases of a certain category, and the rules of movement along the forks of the algorithm on the basis of legislative and doctrinal provisions, i.e. algorithmicizing of the judge's decision of the case. The sequence of intermediate decisions (through yes/no) and the introduced reasoning allow to form a reasoned decision at the expense of information means, systematization of made choices and their coordination between themselves and stencil parts of the judicial act.[30]

In 2021, the Belgorod Region launched a pilot project to test AI technologies in court proceedings. The project involved three court stations of justices of the peace who were connected to the AI system to prepare templates for court orders

[30] 'On the results of the IX Perm Congress of Legal Scholars 'Legal regulation of digitalisation of society: priority tasks'' Lex Russica, no. 12 (145), 2018, pp. 161-174.

to collect three types of taxes from citizens: property, transportation and land taxes.

Within the framework of the experiment, the AI functionality was reduced to reviewing the application for issuing court orders sent by the Department of the Federal Tax Service of Russia for the collection of debts from individuals (note that the program had to recognize not only incoming documents, but also attributes: the collector, debtor, subject, amount of collection), then enter one information system, find the tax debtor, in another system to specify his TIN and residence address, check the necessary information in the third system. Then the program makes a decision according to the given logic – to refuse due to violation of the rules of jurisdiction, due to violation of the terms of appeal to the court, violation of the tax period, etc., or to satisfy the claim. In case of a positive decision, the program opens a template of the court order and inserts the details of the debtor into it, after which it sends the generated order by e-mail to a court employee for its verification.

According to Mr. O. Uskov, Chairman of the Belgorod Regional Court, the result of the experiment proved that it is possible to generate standard court orders based on the texts contained in the applications submitted to the court. It is also possible to automate the process of registration of procedural applications received by the court.

The conducted experiment showed a significant reduction in the time spent by the judge due to the fact that there is no need to form a document, but only to check it, as well as a reduction in the possibility of employee errors due to the technical preparation of the document.

The results of the pilot project for two months of its application are as follows: the time spent by a judge or a member of the court staff on the preparation of a judicial act decreased by 84%, and the time spent on filling in a court case card in the electronic filing cabinet decreased by 96%.[31]

It should be noted that Russian scientists are developing the software of writ proceedings for arbitration courts. This includes cases involving the recovery of debts owed to resource supplying organizations. The prospects of using artificial intelligence systems in courts of general jurisdiction for the purpose of automated preparation of draft court orders in cases of collection of debts on loans by writ of mandamus are also being assessed.

[31] Alex Sugar, 'In the framework of PMJF, the prospects for automation of court proceedings were considered' available at https://www.advgazeta.ru/novosti/v-ramkakh-pmyuf-rassmotreli-perspektivy-avtomatizatsii-sudoproizvodstva/ (last visited on October 10, 2023).

In order to improve the efficiency of Russian judicial proceedings, it is planned to introduce the «Justice Online» superservice starting from 2024, the operation of which provides for the use of artificial intelligence technologies.

According to the Chairman of the Council of Judges of the Russian Federation V.V. Momotov, the Superservice «Justice Online» will use artificial intelligence technologies. «Justice Online» should become the basis for a unified information space of courts, to ensure accessibility and openness of justice. It will combine the possibilities of remote format of filing and receiving court documents in electronic and digital form, remote participation in the judicial process. Superservice will be integrated with other information systems, including the Cloud Digital Platform for the provision of state (municipal) services; the Digital Profile; and the National Data Management System. In addition, the work of the Superservice involves automated drafting of court acts based on the analysis of the text of the procedural appeal and court case materials using AI algorithms.[32]

One of the examples of application of high technologies in the activities of Russian courts is the «Moscow City Court Hotline» system, which is a single reference center developed on the basis of an AI system. This system has been applied since September 13, 2023 so far only in the courts of general jurisdiction of Moscow.

The service allows processing all telephone appeals and eliminates the busyness of the telephone line when citizens apply. Employees of the center answer phone calls from citizens, providing them with information on the procedural stage of the case, time and place of the court session, formation of the list of jury candidates.[33]

It is no exaggeration to say that China is a world leader in the digitalization of all spheres of society without exception. Therefore, it is relevant to study the best Chinese experience in the field of informatization of court proceedings.

The unique experience of integration of modern digital technologies into the judicial process in China has a 33-year history and dates back to 1990. Since that year the development of a criminal law expert system for sentencing and other judicial decisions began, which was eventually implemented in the activities of more than 100 courts, in the practice of prosecutors and law firms.

The conceptual idea of the PRC leadership was the need for intensive digital development of the justice sector to combat corruption in the judiciary, ensure uniformity in the interpretation and application of legislation, and improve the

[32] Victor V. Momotov, 'Electronic Justice in the Russian Federation: Myth or Reality' available at http://www.ssrf.ru/news/vystuplieniia-intierv-iu-publikatsii/42272 (last visited on October 10, 2023).

[33] Vyacheslav Lebedev, 'The experience of digitalisation of Moscow SJCs will be disseminated throughout Russia' available at https://pravo.ru/news/249095/ (last visited on October 16, 2023).

quality of judicial proceedings in general. In order to achieve these goals, a large-scale digitalization was attempted as part of the reform of the Chinese People's Court.

Digitalization involved the establishment of a national computerized court monitoring system, systems for electronic uploading of documents to court databases, automated preparation and verification of documents, and online monitoring of case processing. The informatization of justice was implemented through the establishment of automated information systems. Since 2007, Chinese courts at all levels have been connected to the national e-justice system.[34]

Since 2006, Shandong Province has started to utilize an expert criminal justice system for sentencing using AI technology.[35]

Since 2013, publicly accessible judicial information databases have been put into operation: the China judgments online portal, which contains information on civil, administrative and criminal court judgments; the China trial live broadcast platform, which provides live broadcasts of court proceedings; the China judicial process information online platform, which provides online access to information on court proceedings and publishes updates on the status of court proceedings; and the China executive information online platform, which contains information on the execution of court decisions.

In 2016. The Beijing High Court launched the Intelligent Judge («robot judge») system. The system generates court decisions based on machine learning algorithms, identifies judicial errors and corrects them.

This technology stipulates the necessity in the process of proceedings to enter all data known at the time of consideration of the case into the case file, on the basis of which the program, analyzing the legislation, qualifies the act and determines the corpus delicti. In this case, the system is not autonomous, the judge retains the right to change the decision proposed by the program. Chinese researchers note the benefits of this experiment (e.g., AI has reduced the workload of judges, relieved them of routine duties, and unified the legal language used by numerous Chinese judges).[36]

This program allows judges to understand the issues of proof of charges based on the information on punishment contained in criminal court cases, and suggests the optimal type and amount of punishment. The AI recognizes speech, identifies contradictions in testimony as well as written evidence and alerts the

[34] Alexander V. Macutchev, 'Modern possibilities and limits of artificial intelligence introduction into the system' (2022) 8 Actual problems of Russian law p. 47-58. DOI 10.17803/1994-1471.2022.141.8.047-058.

[35] JI, W., 'The Change of Judicial Power in China in the Era of Artificial Intelligence' (2020) 7(3) Asian Journal of Law and Society. p. 515-530. doi:10.1017/als.2020.37.

[36] Alexander V. Macutchev, 'Modern possibilities and limits of artificial intelligence introduction into the system' (2022) 8 Actual problems of Russian law p. 47-58. DOI 10.17803/1994-1471.2022.141.8.047-058.

judge. The algorithm analyzes information about the defendant's personality and, comparing it with data contained in other sentences, suggests the kind of punishment that judges most often impose in similar circumstances. This makes it possible to unify justice in the country with the largest population and number of judges (more than 100,000) in the world.[37]

In 2017. The State Council of the People's Republic of China approved the Next Generation Artificial Intelligence Development Plan, which proposes the concept of a "smart court" that utilizes AI technologies along with digital technologies.

As part of this concept, since 2017, the first world history court in Zhejian province of Hangzhou, China. The world's first electronic Internet court has been operating in Hangzhou, Zhejian Province since 2017 to hear disputes arising from online sales contracts, online services, as well as small financial loans; disputes related to copyright infringement on the Internet; violations of personal rights and freedoms on the Internet; disputes related to the liability of the manufacturer of goods under online sales contracts; disputes about domain names on the Internet; administrative disputes arising in connection with the management of the Internet. It should be noted that these are not online courts, but stand-alone courts, where the entire procedure and actions, as well as procedural documents are carried out through digital technologies.[38]

All court sessions are held online, evidence is provided digitally, and it is also processed electronically. An analysis of the court's work in the first two years of operation showed that sittings took 67% less time, and the duration of cases was reduced by 25%.[39]

Since 2018, intelligent online court technology has been implemented in Beijing and Guangzhou courts. These courts apply the principle of «online process for online disputes», according to which all stages of the court procedure (filing a lawsuit, accepting a case for consideration, verifying the admissibility of evidence and its examination, hearing and judgment) should be conducted online. According to statistics, the Internet court takes an average of 38 days to reach a verdict, which is half the time compared to the traditional process. In addition, in almost all cases the verdicts rendered were not appealed by the parties.[40]

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37 Oleg A. Stepanov, Denis A. Basangov, 'On the prospects for the impact of artificial intelligence on judicial proceedings' (2022) 475 Bulletin of Tomsk State University. p. 229-237. DOI 10.17223/15617793/475/28.

38 Rusakova, Ekaterina, 'Integration of "smart" technologies in the civil proceedings of the People's Republic of China' (2021) 25 RUDN Journal of Law. p. 622-633. DOI: 10.22363/2313-2337-2021-25-3-622-633.

39 ''Who are the judges?': how artificial intelligence helps humans in court' available' at https://sk.ru/news/a-sudi-kto-kak-iskusstvennyj-intellekt-pomogaet-cheloveku-v-sude/ (last visited on October 16, 2023).

40 Evgeny V. Dragilev, Lyudmila L. Dragileva, Lyudmila S. Drovaleva, Sergey A. Palamarchuk, 'Informatisation of the Judicial System of China' (2022) 8 Juridicheskaya nauka. p. 54-59.

China's Supreme People's Court expects that a unified national system of «intelligent Internet courts» will be established in the near future, which will not only work interconnectedly in a unified digital space, but also be equipped with artificial intelligence technology.

From 2019 China's Supreme People's Court, as part of the development of digital experiments, has introduced «mobile courts» in 12 cities and provinces in China («micro-courts»), the operation of which is implemented on the basis of a special mini-program included in the popular application WeChat, located on the Chinese mobile social platform.

«Mobile courts» allow users and judges to perform various actions via a smartphone using facial recognition technology and other electronic identification systems. Thus, the possibility of conducting remote hearings, presenting evidence online has emerged. This requires the availability of cell phones equipped with an operating system with support for the WeChat application, which combines the functions of messaging, money transfers, online payment.

The «mobile micro-court» application has made it possible to go to court «whenever, and wherever», including «video mediation», audit and counseling procedures, which are available through this application on a cell phone. For the convenience of users, there is the possibility to view all case files, provide evidence, and contact all participants. All these innovations are not only aimed at meeting the higher demands of the population, but also demonstrate a commitment to ensuring justice through high technology,[41] as evidenced by the active promotion of online filing of lawsuits, registration and institution of cases, as well as the openness of access to perform these actions even by foreign parties. Mobile mini-court, is available not only to users of smartphones, but also personal computers. Installing this application on a computer will make it easier for the user to download the documents required for the case.[42]

A well-known example of AI integration in Chinese justice is the application of System 206 («Shanghai Intelligent Criminal Case Support System»), a software for use in criminal proceedings as part of the Intelligent Information Criminal Procedure System of the Shanghai High People's Court.

The System 206 integrates all documents (investigative and prosecutorial and supervisory documents, as well as records of investigative actions) on a particular criminal case, starting with the application (report, complaint) about a crime, into an automatically created electronic folder.

41 Rusakova, Ekaterina, 'Integration of "smart" technologies in the civil proceedings of the People's Republic of China' (2021) 25 RUDN Journal of Law. p. 622-633. DOI: 10.22363/2313-2337-2021-25-3-622-633.

42 Irina V. Khoroshko, 'Foreign experience of the electronic form of civil proceedings on the example of the Republic of Singapore and the People's Republic of China: the history of origin and current state' (2022) 2 Man: Crime and Punishment. p. 183-187. - DOI 10.33463/2687-1238.2022.30(1-4).2.183-187.

The system includes several databases, including standards for the classification and evaluation of forensic evidence, information on criminal cases and convictions. These databases contain more than 45 million documents provided by security agencies, prosecutors and courts, including unsolved cases and cases in which arrests were not authorized or prosecutions were refused. All this information is used by System 206 algorithms for self-learning, which allows them to analyze new cases later.

The features of System 206 are: 1) the use of digital manuals and guidelines to collect evidence and check its reliability and consistency based on specially developed mathematical models, as well as the ability to collect audio-video recordings of various stages of the investigation, from the crime scene examination to the moment of detention and interrogation of suspects; 2) the use of AI technologies to support interrogations, including a natural language processing system that provides diagnostic criteria for evaluating the utterances of the suspects; and 2) the use of AI technologies to support the conduct of interrogations, including a natural language processing system that provides diagnostic criteria for evaluating the utterances of suspects. All these functions are available online and are also realized in the form of special applications for smartphones, which can be installed by judges, investigators and other participants in the process. The developers of the current versions of System 206 invariably emphasize that at present its role is auxiliary, and the decision on the case is made solely by the judge, not by artificial intelligence.[43]

The application of assistive artificial intelligence technologies during the trial is accomplished as follows. As the trial proceeds, System 206 will automatically identify, select, and display (on courtroom screens) evidentiary materials. In a smart courtroom, the following three features are typically utilized during a trial. 1) Intelligent speech recognition: System 206 can instantly and efficiently convert speech into a recording. 2) Intelligent information capture: the System uses technologies such as intelligent case element capture, voice recognition and understanding, etc. to automatically capture and display relevant evidence according to the questions and answers of the defendant, prosecutor and judge. 3) Intelligent Evidence Display: with the functions of displaying evidence, checking evidence, viewing the chain of evidence and judgment, as well as speech and verbal evidence, the System can display relevant materials in the courtroom, such as evidence defects and evidence contradictions found during the trial. The

[43] Evgeny V. Dragilev, Lyudmila L. Dragileva, Lyudmila S. Drovaleva, Sergey A. Palamarchuk, 'Informatisation of the Judicial System of China' (2022) 8 Juridicheskaya nauka. p. 54-59.

combined real-time interaction of these three functions provides intelligent support for the entire trial process in real time.[44]

It is also worth mentioning an interesting development – the Xiaofa robot, launched in 2017 at the Beijing Internet Court. The robot answers visitors' questions in a childlike voice, and its main function is to explain complex legal issues in layman's language. The robot can answer more than 40,000 court and 30,000 legal questions, which has greatly accelerated the process of going to court. The choice of voice is also not random, as it allows litigants to balance their psychological state. China currently has more than 100 robots in courts across the country, as the process of creating intelligent justice is more efficient, moreover, some of the robots have specializations, such as in business, law or specific disputes.[45]

The People's Republic of China continues to actively modernize its judicial system through the use of AI technologies, big data analysis, and cloud computing to ensure universal access to justice and ensure the quality of legal proceedings. In this regard, the Supreme People's Court of the People's Republic of China stated that by 2025 the use of artificial intelligence in the judicial system will expand, which correlates with the plans of the country's leadership to create an internal metaverse.

VI Problems and Risks of Application of AI Technologies in Legal Proceedings

One of the main problems with the use of AI in litigation is that it is based on computational procedures rather than situational logic and does not know how to deal with contexts.[46]

Taking into account that the artificial intelligence system does not «think» but follows a set of calculations pre-programmed in it for mathematical analysis of data and probability inference, it seems difficult to achieve the task of training AI in contextual intellectual procedures that allow applying legal norms taking into account the conditionality of the situation of speech communication. Obeying algorithms, artificial intelligence evaluates the circumstances of the case from the point of view of the laws of formal logic, while the specifics of legal relations (for

[44] Alexander F. Rekhovsky, 'Use of Artificial Intelligence in Chinese Criminal Procedure' (2021) Technologies of the XXI century in Jurisprudence: Proceedings of the III International Scientific and Practical Conference. p. 69-77.

[45] Rusakova, Ekaterina, 'Integration of "smart" technologies in the civil proceedings of the People's Republic of China' (2021) 25 RUDN Journal of Law. p. 622-633. DOI: 10.22363/2313-2337-2021-25-3-622-633.

[46] Azizbek Atazhanov and Bahadir Ismailov (2020). Foreign experience of introducing modern technologies in the justice system. Society and Innovation, 1 (2/S), 269-284. doi: 10.47689/2181-1415-vol1-iss2/S-pp269-284.

example, the partly irrational nature of family and criminal cases) imply the need to take into account the peculiarities of the human psyche, principles of morality and ethics.

In addition, when making a decision, the court is guided by a number of evaluation and value criteria enshrined in the law: for example, the principles of justice and humanism when imposing punishment, the requirements of reasonableness and good faith in civil law. The understanding of such general categories is formed in a person in the process of socialization, upbringing, personality formation – all this cannot be reproduced in a software algorithm.[47]

Most obvious is the risk that legal decision-making will become obscure and that the law itself will adapt to the use of rich data sources at the expense of relatively unquantifiable values such as mercy.[48]

It is rightly noted that it is hardly possible to take into account the principles of international law, constitutional law, in unity with which law enforcement and legal interpretation activities should be carried out.[49]

It is not uncommon that dispute resolution is based on the general principles and meaning of legislation in the absence of special normative regulation, in which case the judge, taking into account an objective assessment of all the actual circumstances of the case, decides to apply the analogy of law or law, which is a manifestation of heuristic principle, creative intuition and does not imply the possibility of finding a strictly logical solution to the AI problem.

Proposals for the introduction of decision support systems in the implementation of the court's authority to evaluate evidence cause legitimate concerns in the scientific community. Many researchers point out that AI systems cannot take into account the principle of freedom to evaluate evidence, be guided by the categories of inner conviction and conscience, which are the basis of the administration of justice and are much more complex categories than software algorithms.[50] [51]

Given that it is objectively impossible to identify the entire system of factors that determine the evaluation of evidence by the court, and therefore to typify such factors, due to the individual characteristics of each case considered in court, it is

[47] Victor V. Momotov, 'The Supreme Court believes robots can never replace a judge' available at https://tass.ru/obschestvo/6296926 (last visited on October 15, 2023).

[48] Irina A. Umnova-Konyukhova, 'The judiciary and Artificial Intelligence: The Legal Aspects of Interaction' (2021) 1 Social and Humanities. Domestic and foreign literature. Series 4: State and Law. p. 106-114. DOI 10.31249/rgpravo/2021.01.11.

[49] Anton Vasilyev, Transformation of Law in the Digital Age. 2020.

[50] Vasily. Y. Fedorovich, Olga V. Khimicheva, Alexey V. Andreev, 'Introduction of informatisation technologies and artificial intelligence technologies as prospective directions of development of modern criminal proceedings' (2021) 2Vestnik Moscow University of the Ministry of Internal Affairs of Russia. p. 205-210. DOI 10.24412/2073-0454-2021-2-205-210.

[51] Maya D. Zhuravleva, 'On the introduction and use of artificial intelligence systems in civil proceedings' (2021) 1 Humanities and Political and Legal Studies. p. 20-28. - DOI 10.24411/2618-8120-2021-1-20-28.

premature to talk about the creation of universal algorithms that would fully replace the judge with artificial intelligence.

At the same time, we believe it is reasonable to transfer to AI the technical functions of evaluating evidence, when, based on the analysis of information, AI will be able to detect contradictions in the factual data presented by the participants of the process as evidence, and only transfer the said data to a human for their subsequent comprehension, without taking part in the final conclusion. The efficiency of both the human and the intelligent system should be taken into account: a legal decision is supposed to determine what is true on the facts of the particular case. An 80% probability would mean that one in five cases would be decided wrongly, which would not be justice.[52]

As a risk of introducing AI technologies in judicial proceedings, their potential independence, autonomy from humans, is noted.

The artificial intelligence system is spontaneously improving, influencing and subjugating humans; it can grow into a dangerous world for humans, which becomes an imminent threat.[53] As a risk of introducing AI technologies in judicial proceedings, their potential independence, autonomy from humans, is noted.

The artificial intelligence system is spontaneously improving, influencing and subjugating humans; it can grow into a dangerous world for humans, which becomes an imminent threat.[54]

Taking into account that AI systems are autonomous self-organizing programs with the ability to self-adaptation, self-regulation and self-learning, nevertheless, we believe that AI technology, taking into account the current level of their development, are not truly intelligent systems, because they have their own limits and do not have the ability to reasonably understand what they do and why. But it is obvious that with the development and improvement of technologies, the above problem will become more and more relevant.

Considering the prospects of application of AI decision support systems in the field of judicial proceedings, it is impossible not to mention that in the scientific community there are doubts about the possibility of ensuring the objectivity of the decision made by artificial intelligence, the need to ensure the technological independence of AI from third parties. It is pointed out that the objectivity will largely depend on the professional level of the developer who created the algorithm,

52 Katie Atkinson and Tevor Bench-Capon and Danushka Bollegala (2020) 'Explanation in AI and law: Past, present and future'. 289 Artificial Intelligence. DOI: 10.1016/j.artint.2020.103387.

53 Victor V. Momotov, 'The Supreme Court believes robots can never replace a judge' available at https://tass.ru/obschestvo/6296926 (last visited on October 15, 2023).

54 'On the results of the IX Perm Congress of Legal Scholars 'Legal regulation of digitalisation of society: priority tasks'' Lex Russica, no. 12 (145), 2018, pp. 161-174.

who, in addition, providing technological administration and having access to the program, will be able to influence it to a certain extent.

The researchers' concern about the order of interpretation of the adopted algorithmic decisions is justified, since the technical complexity of automated systems and the logic of decision-making is often opaque and inaccessible to the public, interested parties are usually not provided with an explanation of the rationale behind the decision-making process.[55]

Artificial intelligence judges are a black box due to the opaque nature of the technology itself and the resulting uncertainty of the legal, social and ethical implications of its use.[56] [57] [58]

In this regard, the principle of "user control" enshrined in the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment, which provides for the possibility for a judge to reject a decision proposed by artificial intelligence and make his or her own decision on the merits, becomes relevant. For litigants, this principle ensures the possibility of direct appeal to the court without the use of artificial intelligence, as well as the right to challenge the decision made with the help of artificial intelligence.

These concerns will become irrelevant if there is a balance in the relationship between AI and humans, which should be based on the auxiliary rather than determinative nature of AI, i.e. by implementing the principle of user control, according to which justice professionals should at any time be able to review court decisions and the data used by AI to obtain the result, and have sufficient information to make decisions independently.[59]

Another aspect of the risks of application of AI technology in justice is the inevitable involvement of a large number of persons in the work of an intelligent system of personal data, which creates uncertainty regarding the accuracy of the system's assessment of such data and the potential possibility of their leakage. At the same time, AI systems in the processing of personal data can be used both to obtain data and to protect them: on the one hand, only machine processing of data

[55] Elena V. Alferova, 'Algorithmized decision making and the right to interpret it' (2021) 1 Social and Humanities. Otechestvennaya i zarubezhnaya literatura. Series 4: State and Law. p. 49-61. DOI 10.31249/rgpravo/2021.01.05.

[56] JI, W. 'The Change of Judicial Power in China in the Era of Artificial Intelligence' (2020) 7(3) Asian Journal of Law and Society. p. 515-530. doi:10.1017/als.2020.37.

[57] Han-Wei Liu, Ching-Fu Lin, Yu-Jie Chen, 'Beyond State v Loomis: artificial intelligence, government algorithmization and accountability' (2019) 2 International journal of law and information technology. p. 122-141.

[58] Ran Wang, 'Legal technology in contemporary USA and China' (2020) 39 Computer Law & Security Review. doi.org/10.1016/j.clsr.2020.105459. https://www.sciencedirect.com/science/article/pii/S0267364920300649.

[59] Alexander V. Macutchev, 'Modern possibilities and limits of artificial intelligence introduction into the system' (2022) 8 Actual problems of Russian law p. 47-58. DOI 10.17803/1994-1471.2022.141.8.047-058.

allows to exclude the possibility of their dissemination or use to the detriment of the personal data subject, on the other hand, such technology can be used to protect them and help the subject of personal data processing to protect such information. For example, Elinar has developed software that makes it possible to identify an individual without the possibility of personal data leakage. For example, if a customer submits a copy of his passport to an organization, the artificial intelligence system divides the image of the document into many small parts, and subsequent identification is made in relation to these fragments, without the overall appearance of the document. A full copy of the passport is not contained in the system, and human operator access to the database may also be difficult or excluded.[60]

We suggest to consider the introduction of AI in justice not as a potential replacement of a judge, but as a technological tool to ensure the greatest efficiency and productivity of judges' labor.

VII Conclusion

The conducted research allows us to conclude that the development of information technologies has proved the prospect of introducing artificial intelligence technologies in the sphere of court proceedings. At the same time, the key factor is the possibility of using AI systems in the activities of courts exclusively in conjunction with a human judge and the possibility of their functioning under human control.

Despite the dynamic development of AI technologies, their use in the judicial systems of China and Russia is still fragmentary and limited to individual experiments. However, the existing experience in the use of intelligent systems has shown the high efficiency of digital transformation of justice by optimizing the judicial process through the transfer to intelligent decision support systems of part of the routine functions of the case management department and the court; increasing the qualitative characteristics of legal proceedings (increase in the number of cases and speed of their consideration) and, as a result, improving the quality of justice.

Today, the idea of continuing automation is gaining more and more support in the scientific and practical communities. However, for the full implementation of artificial intelligence systems in legal areas of human activity, among others, it is necessary to reduce to the necessary minimum the possible negative consequences of such integration, which, in turn, puts before modern legal science the task of studying not only the legal, but also the technological foundations of artificial intelligence systems. In order to implement artificial intelligence, the state needs

[60] Elinar: official site. https://www.elinar.com/artificial-intelligence/gdpr-solution-ai/.

to get a clear answer from the scientific community about the opportunities and risks of this technology, and the scientific community can provide this information only by being in close informational contact with developers and operators of artificial intelligence.

In conclusion, let us emphasize once again that people tend to trust automated systems, as a result of which machine learning technologies, which objectively, due to their imperfections, cannot replace humans today, carry the risk of replacing the user's decision with an artificially generated answer, while it is required that a person only takes into account the opinion of the system, but the final decision is made independently. Accordingly, the task is to make it so that a human being is not excluded from doubting the validity of the conclusion offered to him, which is achievable by means of a small modification of the interface. Thus, in order to ensure an exceptionally auxiliary role of artificial intelligent systems in the realization of the function of decision support, in addition to training the subjects of application of such systems, it is necessary to assess how a person perceives and interprets the proposed conclusion.

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