

PROSPECTS OF USING ARTIFICIAL INTELLIGENCE IN LEGAL PRACTICE

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Abstract.

The article explores the rapidly growing role of artificial intelligence (AI) in reshaping legal practice, analyzing its potential applications, benefits, and the challenges that come with integrating AI into the legal field. As AI technology advances, it offers unprecedented opportunities to streamline legal processes, enhance efficiency, and empower legal professionals with powerful new tools. AI's capabilities in areas such as contract analysis, legal research, document review, and predictive analytics have the potential to significantly transform how legal work is conducted. The article examines the current state of AI adoption within legal practice and discusses its role in automating routine tasks, thus allowing lawyers to focus on more complex, value-added aspects of their work.

However, the integration of AI into legal practice also brings about several challenges. Ethical concerns are paramount, particularly in areas such as algorithmic bias, transparency, and accountability. AI systems, which are often considered "black boxes," can make decisions that lack explainability, raising concerns about fairness and justice in legal proceedings. The article explores how AI may impact decision-making processes, especially in areas where human judgment has traditionally been paramount, such as in sentencing or dispute resolution. Furthermore, data privacy and the security of sensitive legal information are significant issues that need to be addressed when utilizing AI in legal practice.

In addition to ethical and legal concerns, the article discusses the regulatory landscape surrounding AI in legal contexts. Various jurisdictions are beginning to consider how best to regulate AI's use in legal practice, with some adopting frameworks to ensure AI applications meet ethical and legal standards. The author explores ongoing efforts in Europe, the United States, and other regions to develop policies that address AI's implications in the legal sector.

Another key point discussed is AI's potential to increase access to justice. By automating tasks, reducing costs, and improving the availability of legal services, AI could help bridge the gap in access to legal resources, particularly for individuals and businesses with limited financial means. AI systems could democratize legal knowledge and provide cost-effective legal advice, making legal services more accessible to a wider population.

Keywords: artificial Intelligence, legal practice, legal technology, access to justice, Algorithmic Decision-Making, legal ethics, legal innovation, automation in law, legal services, AI regulation, predictive analytics, legal responsibility, data privacy.

Background and Context of AI Implementation in Law.

In the modern world, artificial intelligence (AI) is gradually transforming from an abstract scientific phenomenon into a practical tool that is increasingly integrated into various areas of societal life. Law, as a fundamental field, has not remained indifferent to the processes of digital transformation. Legal practice, particularly in judicial proceedings, consulting, document

preparation, and legal analysis, is already feeling the impact of new technologies, including artificial intelligence.

The use of AI in legal activities opens up new opportunities to enhance the efficiency of law enforcement. Automation of routine processes, analysis of large volumes of legal information, prediction of court decisions, and identification of legal risks are becoming a reality thanks to AI algorithms. These tools not only optimize the work of lawyers but also help reduce the human factor, which is often the cause of mistakes.

Amid the development of legal technologies (LegalTech), there is a need for a comprehensive scientific understanding of the prospects and limits of AI use in the legal field. The issues of efficiency, reliability, transparency, and accountability of AI algorithms involved in legal procedures require systematic study. It is especially important to ensure a balance between technological innovation and adherence to fundamental principles of justice, such as equality of the parties, adversarial proceedings, and fairness.

The challenges that the legal community faces due to the penetration of AI into practice include legal responsibility for the consequences of algorithmic actions and the need for correct interpretation of decisions made through machine analysis. Therefore, there is an urgent need to update approaches to legal education and enhance the digital competence of legal professionals who will work in these new conditions.

In many jurisdictions, active work is already underway to create a regulatory environment for the ethical and safe use of AI in legal practice. Such initiatives are being observed in the European Union, the United States, China, and other countries.

Given the wartime conditions, limited resources, and the need to ensure continuous access to justice, AI-based digital solutions could become a tool to enhance the efficiency of judicial and administrative procedures. They can facilitate access to legal assistance for citizens, reduce the burden on the judicial system, and ensure the stability of institutional operations in crisis situations.

Today, scientific research into the prospects of using AI in legal practice is not only timely but also strategically important. It helps lay the foundation for developing effective government policy in the field of legal digitalization, creating the necessary regulatory framework, and implementing innovative solutions that will meet the challenges of today and the future.

The issue of using artificial intelligence (AI) in legal practice is attracting increasing attention from the global academic community, prompting the emergence of interdisciplinary research at the intersection of law, information technology, philosophy, ethics, and sociology. In contemporary discourse, the question of AI's impact on legal activity is actively analyzed both in the context of the transformation of law enforcement and from the perspective of developing regulatory frameworks for the functioning of digital tools within the legal field.

In the international academic arena, special attention is given to studies concerning the implementation of algorithmic systems in judicial proceedings, legal analysis, and compliance. Works by researchers such as Daniel Martin Katz, Harry Surden, Cary Coglianese, Frank Pasquale, Ryan Calo, and Mireille Hildebrandt have laid the foundation for a critical understanding of the benefits and risks of using AI in the legal sphere. Specific focus is placed on topics like algorithmic transparency, the discriminatory potential of machine learning, and the principles of fairness in automated law enforcement.

Several international research centers and analytical institutions, such as The Future of Humanity Institute (Oxford) [1], AI Now Institute (New York University)[2], Centre for AI and

Digital Policy)[3], and the European Law Institute [4], are systematically studying the use of AI in various spheres of societal relations, including in the field of jurisprudence.

At the intergovernmental level, a significant contribution is made by international organizations, including the Council of Europe, OECD, UNESCO, the European Commission, and WIPO, which have initiated the adoption of conceptual documents on the ethical and legal regulation of AI. In 2021, the European Commission presented the draft Regulation on Artificial Intelligence (AI Act) [5], which outlines approaches to the legal oversight of algorithmic systems in high-risk sectors.

At the same time, despite the intense development of academic interest, it should be noted that most of the research focuses on the technical-ethical aspects of AI functionality or on the issues of regulating its autonomous behavior. Much less attention has been paid to the systemic legal analysis of changes in the structure of the legal profession, the transformation of mechanisms for interpreting and applying the law, challenges to the standards of proof, and the legal risks associated with delegating certain lawyer functions to algorithms.

Moreover, there is a limited number of fundamental works that comprehensively explore the integration of AI into various segments of legal activity—ranging from analyzing judicial practice to the development of legal documents, compliance assessment, anti-corruption control, mediation, and pre-trial dispute resolution. In many cases, academic publications are fragmented and do not cover the full spectrum of legal transformations caused by AI.

Thus, despite the significant theoretical and applied work already done, the issue of AI use in legal practice remains under-researched in a systemic legal dimension. This creates the need for an interdisciplinary scientific approach that will not only outline the prospects for applying AI in jurisprudence but also lay the theoretical foundations for the further development of international and national legal regimes capable of effectively responding to the challenges of the digital age.

Differentiating LegalTech and Artificial Intelligence in Law.

Today, literature can identify two approaches to the implementation of technologies in the field of jurisprudence: using LegalTech tools and applying artificial intelligence. Both approaches reflect the overall trend of legal sector transformation under the influence of digitalization but have distinct meanings, functional features, and levels of legal and ethical challenges. LegalTech, as a broader concept, encompasses the full range of technological solutions that optimize legal activities: automated document management, online consultation platforms, e-justice systems, blockchain services for registering rights, legal marketplaces, and more. Its goal is to enhance the efficiency, accessibility, and transparency of legal services without necessarily relying on technologies that simulate human thinking.

On the other hand, the second approach involves the integration of AI as a highly specialized but technologically complex tool capable of not only automating routine operations but also performing complex legal text analytics, predicting court decisions, processing natural language in legal contexts, generating standard documents, and forming legal conclusions. The application of AI in the legal field involves the use of machine learning algorithms, neural networks, and NLP tools, which significantly expand the horizons of legal work intellectualization. However, at the same time, it intensifies issues related to transparency, accountability, discriminatory risks, and the preservation of the human factor in the administration of justice.

In this regard, the study of the relationship between the concepts of LegalTech and artificial intelligence in jurisprudence becomes particularly significant. It is necessary for the theoretical

codification of the conceptual apparatus within the scope of law and technology, the correct delineation of their areas of application, as well as for adequate regulatory governance. In the field of law enforcement, such classification allows identifying high-risk areas where the implementation of artificial intelligence requires the introduction of special guarantees for the protection of human rights. In the field of lawmaking, it helps determine the directions and boundaries of regulating high-risk technologies in light of European approaches (for example, according to the European Artificial Intelligence Act) [6], where AI systems in the judicial sector are considered to pose a serious threat to fundamental rights.

Furthermore, from the perspective of the development of the legal profession and education, it is important to understand that not all LegalTech tools require a high level of technological literacy or algorithmic trust, as is characteristic of AI solutions. This understanding allows for the creation of structured educational programs for lawyers that combine basic skills in working with LegalTech solutions and critical evaluation of the use of artificial intelligence in the context of legal analysis, ethics, procedural autonomy, and professional responsibility.

Thus, the relationship between the concepts of LegalTech and artificial intelligence in jurisprudence represents an important methodological focus of contemporary research, which ensures a balanced development of the digital transformation of the legal system, while preserving its humanistic nature, the principles of the rule of law, and human rights guarantees.

Today, digital technologies have gradually transformed the legal sphere, creating a new paradigm for legal science, practice, and education. Starting with the use of electronic document circulation in judicial proceedings and legal practice in the 1990s, the digitalization of law has gained momentum through the development of the Internet, cloud technologies, databases of court decisions, and the algorithmization of legal procedures.

In the first stage of digitalization (1990–2005), the key role was played by the computerization of legal libraries, the appearance of databases of legislation and case law [7]. These tools significantly improved access to legal information, facilitating the rapid search for normative legal acts and court decisions. For example, the creation of LexisNexis and Westlaw revolutionized legal research in the U.S., which became the foundation for the formation of electronic jurisprudence [8].

From 2005 to 2015, digital technologies began to perform automation functions: electronic document submission, online court services, case management systems (CMS), etc. During this period, the idea of "e-Justice" also emerged, which was supported at the European Union [9] level and became the foundation for the modern development of electronic justice. In the 2010s, artificial intelligence technologies were increasingly used for processing legal information, drafting standard contracts, and predicting court decisions.

The LegalTech sector has gained particular relevance, encompassing companies and startups that develop innovative digital solutions for the legal field. For example, tools like ROSS Intelligence (based on IBM Watson) or DoNotPay enable the automation of legal assistance in certain areas¹. These services simplify access to justice, especially for vulnerable groups, raising questions about the balance between automation and the quality of legal services.

With the emergence of algorithmic systems capable of predicting court decisions (for instance, using NLP models that analyze ECHR cases) [10], the concept of "algorithmic justice" comes to the forefront. At the same time, scholars warn about the risks of discrimination and violations of the rule of law due to the opacity of algorithms [11].

In the 2020s, the evolution of digital technologies in law enters the phase of intellectual digitalization — integrating artificial intelligence, Big Data, and blockchain into legal procedures. Blockchain technologies open new horizons for the protection of intellectual property rights, digitalization of notarial acts, and smart contracts)[12]. These tools are already being implemented in pilot projects in the EU, the USA, and China.

Currently, legal science is facing challenges such as the formation of new normative-ethical boundaries for the use of AI in the judiciary, determining the legal status of algorithms, issues of responsibility for their actions, protection of personal data, the right to explanation, and algorithmic fairness. This indicates the need for not only technological but also conceptual renewal in the field of jurisprudence)[13].

Thus, the evolution of digital technologies in the legal sphere is not just a process of technical transformation, but a profound change in the content, structure, and functions of law in the digital age. This process requires interdisciplinary analysis and continuous normative reassessment.

Introduction of artificial intelligence into judicial proceedings.

One of the most prominent examples of such changes is the introduction of artificial intelligence into judicial proceedings, which is becoming one of the most dynamic trends in the digital transformation of justice. The use of algorithms to analyze case law, identify patterns in judicial practice, and predict court decisions significantly alters the processes of preparing for court hearings, making decisions, and evaluating evidence.

One of the most well-known examples of AI application in judicial proceedings is experimental research using Natural Language Processing (NLP) [14] methods and machine learning to predict the rulings of the European Court of Human Rights (ECtHR). The 2016 study by Aletras et al. demonstrated that machine learning algorithms could predict ECtHR decisions with over 79% accuracy by analyzing case texts)[15]. The algorithm assessed not only legal arguments but also used linguistic and contextual markers, showing the potential of artificial intelligence in understanding legal narratives.

Another large-scale study, conducted by Medvedeva, Vols, and Wieling in 2020, confirmed that algorithms could model the logic of court decisions with high accuracy, especially in cases where the court follows established practices)[16]. At the same time, they highlighted the threat of confirmation bias, where an algorithm trained on a particular practice is inclined to support existing judicial approaches without considering the evolution of legal norms. Therefore, there is a risk that such algorithms may not only replicate but also legitimize outdated or discriminatory approaches, reducing the flexibility of judicial practice and complicating the implementation of innovations in the legal system.

In the United States, systems like COMPAS (Correctional Offender Management Profiling for Alternative Sanctions), used to assess the risk of recidivism during sentencing, have become the subject of intense debates due to concerns about algorithmic bias)[17]. The program has been criticized for racial discrimination and the opacity of the mechanisms behind its risk assessments)[18]. This has led to a discussion about whether these algorithms align with the principles of due process of law and the right to a fair trial.

Such criticism has sparked a broader legal and ethical debate about the use of algorithms in criminal justice. Lawyers and human rights activists have raised questions about the accused's right to access the logic behind the decisions made by these systems, which can have a significant impact on

an individual's fate. The lack of ability to challenge or verify an algorithmic conclusion threatens basic principles of justice, such as the presumption of innocence and equality before the law.

In particular, a study by ProPublica found that COMPAS disproportionately misclassified African American defendants as high-risk for recidivism compared to white defendants¹. Moreover, the use of proprietary algorithms, like COMPAS, raises concerns about violations of due process and the right to a fair trial. In the case of *Loomis v. Wisconsin*, the defendant challenged the use of COMPAS in his sentencing, arguing that the inability to examine the algorithm violated his constitutional rights¹. In response to these concerns, some jurisdictions in the U.S. have begun to develop legislative initiatives aimed at regulating the use of AI in the judicial system, advocating for transparency, accountability, and auditability of algorithmic systems.

It is worth noting that in the European Union, the use of AI in the judicial sphere is considered not only in terms of efficiency, but also through the prism of ethics and human rights. In 2018, the European Commission on the Efficiency of Justice of the Council of Europe (CEPEJ) adopted the European Ethical Principles on the Use of AI in the Judiciary, which define five key guidelines: respect for fundamental rights, non-discrimination, quality and safety, transparency, accountability and appealability)[19].

These principles form an ethical framework for the integration of intellectual technologies into justice, aimed at ensuring justice, trust and protection of fundamental human rights in the context of digital transformation. Let us consider each of the principles in more detail:

1. The principle of respect for fundamental human rights means that the use of artificial intelligence in judicial practice must strictly adhere to the fundamental human rights and freedoms guaranteed by international instruments, in particular the European Convention on Human Rights. This means that any decision involving an algorithm must be consistent with the right to a fair trial, the right to privacy, and the right to an effective remedy. AI cannot substitute or limit human judgment where basic human rights are concerned.

2. The principle of non-discrimination means that artificial intelligence should not create or exacerbate existing forms of discrimination. Algorithms should be thoroughly tested to detect bias in the input data or decision-making mechanisms. Equality before the law requires that all individuals, regardless of race, gender, ethnicity, religious beliefs, or other characteristics, be equally protected from biased interpretation of data or AI decisions.

3. Quality and security. The quality of artificial intelligence systems implies high accuracy, reliability, and relevance of information processing. Security includes both data protection and protection against unauthorized interference or manipulation of algorithms. It is important to establish clear standards for testing, software updates, and certification procedures to minimize technological and legal risks in the use of AI in judicial activities.

4. Transparency is the ability to understand the principles of functioning of algorithms used to make or support judicial decisions. It implies openness about what data was used, what criteria formed the basis of the decision, and how the algorithm processed the information. Transparency is a prerequisite for public trust in digital tools in the judiciary.

5. Accountability and the possibility of appeal. Accountability means that there are clearly defined entities responsible for the functioning and consequences of the use of AI in justice. This creates the preconditions for real protection of the rights of individuals that may be violated as a result of algorithm errors. The possibility of appeal guarantees that every person has the right to apply to the competent judicial authority to review a decision made with the participation of AI in order to ensure fairness and legality.

Judicial Analytics.

One of the most commonly used areas of AI application in the legal sector is judicial analytics. Services such as Lex Machina or Ravel Law offer tools for analyzing precedents, judges' behavior, and the likelihood of appealing decisions. This is creating a new culture of judicial practice - analytically sound and predictable. However, the legal community emphasizes that predicting a decision is not the same as its legitimacy, and no algorithm can replace judicial discretion.

Lex Machina was created in 2006 as part of a Stanford University research project called the Stanford Intellectual Property Litigation Clearinghouse (IPLC), which became the basis for the further development of the commercial platform. In 2008, the project was incorporated as a separate company, and in 2010 Lex Machina officially entered the legal services market. The acquisition of the company in 2015 by LexisNexis Corporation significantly accelerated its integration into the legal practices of leading US firms)[20]. Lex Machina is a powerful legal analytics platform that uses artificial intelligence and big data analysis to provide users with detailed information about court proceedings. Its core capabilities are

Case law analysis - the platform processes a large number of court decisions and automatically identifies patterns in case resolution depending on the subject matter (e.g., patent law, commercial disputes).

Behavioral analysis of judges - Lex Machina allows you to predict the decisions of specific judges based on their previous decisions, for example, their tendency to rule in favor of the plaintiff or defendant.

Predicting case outcomes - using historical data, the system predicts the likelihood of success of a lawsuit, the duration of the process, and even the likelihood of recovering compensation.

Analysis of lawyers and firms - the service analyzes the success of law firms and lawyers in different types of cases, which allows clients to choose their defense counsel more reasonably. In addition, constant updates to this system have led to the introduction of two more functions - Attorney Data Engine and Outcome Analytics. The first feature updates information about the lawyer and law firm and adds missing data, ensuring that the data provided is complete and up-to-date. The second unique feature provides information based on important orders, such as patent infringement findings during summary judgment or restraint of trade findings during trial) [21].

The effectiveness of Lex Machina became particularly evident after 2015, when more than 74% of the leading US law firms began to actively use it. Today, according to official data posted on the Lex Machina website, 90% of the largest companies trust them) [22].

The next innovative platform is Ravel Law, which specializes in in-depth analysis of court decisions and behavioral analysis of judges. Ravel Law was founded in 2012 by graduates of Stanford Law School. The goal of the development was to create an innovative platform for legal research that would combine machine learning and data visualization capabilities. In 2017, Ravel Law was also acquired by LexisNexis Corporation, which allowed the platform to expand its capabilities and provide integration with other legal research products) [23].

Unlike Lex Machina, Ravel Law focuses primarily on visualizing the relationships between court decisions, which makes it much easier to navigate complex precedent structures. The tool allows you to analyze citations of judicial acts, track the evolution of legal doctrines, and study the behavioral characteristics of judges. Particular attention is paid to analyzing the probability of appellate reversal of decisions, which allows users to build appeal strategies based on statistical data. Ravel Law provides statistics on how often judges cite certain decisions, how they usually

decide certain categories of cases, and even the tone of their decisions. The tool creates graphical maps of the relationships between court decisions, which helps lawyers quickly see which precedents have the greatest impact. The service shows the likelihood that a particular judge's decision will be overturned by the appellate court)[24].

Thus, Lex Machina and Ravel Law fundamentally change the strategy of court preparation, allowing lawyers to build predictive models of judges' behavior and prepare arguments based on real analytical data.

China is experimenting with a similar model called Smart Courts, where AI is involved in the consideration of minor cases (especially in commercial jurisdiction), such as drafting decisions, checking compliance with similar cases, and controlling deadlines) [25]. The respective model of AI use in legal activities demonstrates efficiency, but raises concerns about the formalization of justice and possible violation of the right to individualized legal proceedings.

In general, the use of AI to analyze precedents and predict decisions in court proceedings opens up significant prospects for analytical enhancement of judicial work, improving access to justice, and optimizing procedural procedures. At the same time, this requires a deep regulatory and ethical understanding of the new paradigm of “algorithmic justice”, with mandatory compliance with legal guarantees and the rule of law.

Automated Legal Document Creation.

The next area of artificial intelligence application in the professional activities of lawyers is the automation of legal document drafting, which is one of the key areas of artificial intelligence application in legal practice. It involves the use of specialized software solutions to generate, review, analyze, and optimize legal texts, from standard contracts to complex procedural documents. This process not only significantly improves the efficiency of legal work but also contributes to the unification of legal practice, reduction of human errors, and access to legal aid.

In the early days, automation was mostly about template-based document automation, but modern solutions are based on natural language processing (NLP) and machine learning. Software platforms such as Contract Express (Thomson Reuters), DocuSign CLM, LegalZoom, or Lexion allow you to create contracts based on variables embedded in legal logic and even automatically check for consistency and compliance with internal company policies) [26].

In the procedural sphere, automation is implemented through systems such as DoNotPay, a chatbot that generates appeals, appeals, claims for fines and administrative cases. Its use marks a new phase in access to justice, as users without legal education can generate basic procedural documents in accordance with the law. Despite the simplification, such tools are not always able to take into account the specifics of individual cases and do not guarantee the legal validity of claims) [27].

Significant progress has been made in automating due diligence processes. Platforms such as Kira Systems or LawGeex use deep learning algorithms to review contracts, identify inconsistencies, risky clauses, or legal traps. For example, LawGeex conducted a study in which the system identified errors in contracts with an accuracy of 94%, which is higher than the average lawyer's rate (85%)) [28]. This confirms that AI can provide high quality legal analysis in highly specialized tasks.

However, the automation of legal documents raises a number of ethical and legal issues: from liability for the consequences of errors to privacy issues, personal data protection, and the admissibility of machine-generated documents in court. Moreover, there is a growing need for

legal due diligence of document-generating algorithms to ensure their compliance with national and international law) [29].

Based on the above, it can be argued that automation of legal documents contributes to the creation of a new paradigm of “digital legal practice”, where a lawyer becomes not only an interpreter of rules, but also a designer of legal algorithms. This requires new competencies, including an understanding of the technological foundations and principles of digital responsibility.

Legal Consulting and Compliance.

Another area where artificial intelligence is actively used is in legal consulting and compliance, which allows optimizing various legal services, reducing costs and increasing process efficiency. The use of AI in these areas also helps to achieve greater accuracy and reduce human error, especially in the context of analyzing large amounts of data, complying with regulatory requirements, and developing strategies to avoid legal risks.

AI in legal consulting can perform a wide range of tasks, from analyzing contracts to recommending strategic decisions. Software products based on machine learning and natural language processing technologies help lawyers quickly and efficiently review legal documents and find inconsistencies in contracts that could lead to legal risks for clients) [30].

One of the most popular applications of AI is contract analytics, which automatically checks documents for inaccuracies, contradictions, or risks that may arise during the course of fulfilling the terms of a contract. Platforms such as Kira Systems and Luminance use machine learning algorithms to analyze a large number of contracts in a short time, which reduces the cost of manual review and improves the quality of consulting) [31].

AI is also actively used to predict legal outcomes. For example, machine learning algorithms can analyze the history of court decisions and predict the probability of a case outcome in court based on this information. This allows lawyers to provide their clients with more accurate recommendations and forecasts on the development of legal situations) [32].

Compliance management is another key area where AI shows great potential. An AI system can automatically track changes in the regulatory environment and monitor compliance in real time. It is able to analyze legislative changes, including local and international regulations, enabling companies to quickly adapt their strategies to new requirements) [33].

One of the main applications of AI in compliance is the detection and analysis of anomalies in data that may indicate violations of internal policies or regulatory requirements. For example, using AI to detect financial anomalies or potentially fraudulent transactions helps companies prevent significant financial losses and avoid legal sanctions. Systems such as Palantir and IBM Watson integrate with corporate information systems to detect policy violations that may affect the overall compliance status of the enterprise) [34].

Additionally, AI can be used to automate customer monitoring and identify risky partners. For example, the use of big data analytics technology allows you to create customer profiles and identify potential risks related to legal violations or financial fraud. This process, known as “know your customer” (KYC) monitoring, is an important element of the compliance strategy for companies operating in the financial sector) [35].

Despite its many benefits, the use of AI in legal consulting and compliance faces a number of challenges. One of the main ones is the ethical issues associated with automated decision-making. In some cases, using AI to make legal decisions can lead to errors or incorrect conclusions,

as machines are unable to take into account the human complexity and context of each case. Therefore, it is important to have human oversight to verify the results of AI before making final decisions) [36].

Another significant challenge is data security and protection. The use of AI in legal consulting and compliance requires the processing of large amounts of confidential information. This increases the risk of data leaks or unauthorized access, which challenges companies to ensure an adequate level of cybersecurity) [37].

In the future, the use of AI in the legal sector has significant potential for further development. In particular, AI can contribute to the personalization of legal services by automatically adapting recommendations and strategies to a specific client or case, taking into account individual circumstances. Already today, platforms such as ROSS Intelligence and Legal Robot use powerful algorithms to improve the accuracy of legal opinions and reduce the cost of consulting services) [38].

Utilization of Chatbots.

Another important and rapidly developing area of artificial intelligence application in legal practice is the use of chatbots and online consultation systems. Unlike analytical platforms or automated document processing systems, these tools directly interact with the user in real time, providing prompt provision of basic legal assistance. Their popularity is driven not only by the growing demand for affordable legal support, but also by their high potential for scaling and integration with other digital services.

Legal chatbots and online consultation systems are becoming increasingly important in modern legal practice, serving as an example of the effective use of artificial intelligence to expand access to justice and optimize the provision of legal aid. These technologies are software agents that use machine learning and natural language processing algorithms to simulate communication with users, providing legal information or advisory support in an automated manner. Their emergence and development has become a possible response to the ever-growing challenges of the legal profession, in particular the need for fast and massive provision of basic legal aid.

Among the most well-known examples in the world is DoNotPay, an American-British startup that bills itself as the “world's first robot lawyer” capable of challenging parking tickets, filing complaints with government agencies, and even generating personal legal documents. This startup was founded by Joshua Browder in 2015. It was initially created to appeal parking tickets, but over time, it has expanded its functions to include filing complaints with government agencies and generating legal documents. According to Wired, by 2016, DoNotPay had helped users appeal 160,000 parking tickets in London and New York, succeeding in 64% of cases)[38]. However, in 2024, the US Federal Trade Commission fined the company \$193,000 for false advertising and insufficient testing of its legal services)[39]. The United Kingdom has developed LawBot, a chatbot that analyzes the circumstances of a user's case and provides advice on criminal law. This British chatbot was developed in 2016 by Cambridge University students to provide free legal assistance in cases related to sexual offenses. LawBot covers 26 major criminal offenses in the law of England and Wales and helps users understand how the law applies to their situation) [39]. Ukraine is also witnessing a dynamic development in this area: in particular, the chatbot “Legal Advisor for IDPs” developed by the Right to Protection charitable foundation with the support of the EGAP Program, the Ministry of Reintegration of the Temporarily Occupied Territories and the Ministry of Digital Transformation provides free legal assistance to internally displaced persons

and other war victims. This digital assistant is available 24/7 via Viber, Telegram, Facebook Messenger, as well as through a web interface, and covers issues related to paperwork, social benefits, employment, housing, labor and family relations. In 2022, more than 25 thousand Ukrainians used this service to receive legal advice¹. Such systems greatly facilitate the lives of ordinary citizens who often do not have access to qualified legal assistance.

The benefits of implementing legal chatbots are obvious. First, they provide continuous access to consultations 24/7, which is especially important in crisis situations or for residents of remote regions. Secondly, thanks to the use of AI, these services provide answers almost instantly, significantly saving the user's time.

Thirdly, they are financially affordable, as they do not require the cost of personal communication with a lawyer. In addition, chatbots can simplify complex legal language by adapting it to the level of understanding of an ordinary person, which increases the legal literacy of the population as a whole.

However, despite a number of advantages, the use of chatbots in the legal sector is not without serious challenges. The most important among them is the limited number of legal scenarios: bots can only handle template or standard situations, while atypical or complex cases remain beyond their competence. In addition, there is the problem of legal liability for erroneous advice: the question of whether the developer or the user is liable is still unresolved in many countries. The issue of personal data protection is equally important: the processing of confidential information requires compliance with the highest security standards, in accordance with the GDPR and national legislation. Also, in some cases, chatbots may have difficulty understanding language, cultural, or contextual nuances.

Despite these difficulties, the prospects for the development of legal chatbots remain extremely encouraging. They are expected to be more widely integrated into e-governance and e-justice systems, which will ensure a more efficient digital transformation of legal services. Current trends also indicate the introduction of omnichannel platforms that will combine text bots, voice assistants, video consultations, and automated document management. The use of generative AI, which is capable of providing more flexible, adaptive, and personalized responses, is also growing, improving the quality of online consultations.

Today, legal technologies Legal tech is one of the most dynamically developing areas of innovation in legal practice, especially in the United States, where technological progress is actively integrated into legal processes. The US justice system, with its complex and well-structured legal infrastructure, is one of the main fields for applying innovative solutions aimed at increasing the efficiency of the legal process, reducing costs and providing access to justice for a wider range of people) [40]. The growing popularity of legal technology in the United States is driven by the development of artificial intelligence, as well as the use of big data and the latest platforms to provide legal services. This makes it possible to optimize many stages of the legal process, including case management, legal research, document preparation and review, and predicting the outcome of litigation.

Automation of legal documents has become one of the main advantages of legal technology. Platforms such as LegalZoom and Rocket Lawyer have become a symbol of a new era in legal document creation and review, providing access to legal services for small businesses and individuals. These startups offer users the ability to create legal documents such as contracts, wills, and agreements on their own, which significantly reduces the cost of services and makes them accessible to a wider range of clients) [41].

Another important innovation is the use of artificial intelligence to analyze legal texts. Systems such as Kira Systems are able to automatically extract key provisions from large volumes of documents, which significantly reduces the time required to review them. This allows lawyers to efficiently process large amounts of information without losing accuracy and reducing the likelihood of human error) [42].

In addition to reducing the time required to process documents, artificial intelligence in systems such as Kira Systems allows you to identify non-obvious connections between contractual provisions, compare them with industry standards and previous cases, which is especially useful when conducting due diligence. The built-in machine learning algorithms are constantly being improved based on the analysis of millions of documents, which increases the accuracy and relevance of the results obtained in various legal contexts, from mergers and acquisitions to assessing the compliance of contracts with applicable law.

Another advantage is the ability of such systems to be flexibly customized to meet the needs of a particular law firm or corporate department. Users can define their own clause templates, customize search parameters, and create unified document review protocols. This not only standardizes legal analysis, but also ensures that knowledge is retained within the organization, which is critical for the continuity of teams on large projects.

The implementation of such tools also transforms the role of lawyers: the focus shifts from routine text verification to strategic analysis, risk assessment, and making well-founded decisions. Thus, artificial intelligence does not replace lawyers but, on the contrary, enhances their professional effectiveness, allowing them to focus on tasks that require critical thinking, ethical evaluation, and a deep understanding of the legal context.

In this regard, it is important to highlight the role of lawyers in the modern information society. In the 21st century, digital technologies have become a key factor in the transformation of all areas of public life, including the legal profession. The implementation of innovative solutions based on artificial intelligence, blockchain, big data, smart contracts, and other technologies is changing not only the tools lawyers use but also the very nature of their professional activities. A modern lawyer can no longer be solely an expert in legal norms – they are becoming an analyst, a digital advisor, and a mediator between the legal and technological worlds. This transformation is not optional – it is driven by the challenges of the times and the need for the legal system to be more efficient, flexible, and accessible) [43].

The Transformation of the Legal Profession in the Digital Age.

The emergence of LegalTech platforms, capable of conducting case law searches, drafting standard contracts, performing due diligence, as well as automated systems for predicting court decisions (e.g., ROSS Intelligence, Luminance), indicates that part of the work previously carried out exclusively by lawyers is now being delegated to machines. These tools not only enhance the efficiency of legal practice but also require lawyers to acquire new knowledge: understanding the logic of algorithms, evaluating the quality of automated decisions, and the ability to communicate with IT specialists. Richard Susskind emphasizes that the traditional "lawyer-client" model is becoming obsolete, giving way to the "service platform-user" model, where the role of the lawyer shifts from being the monopolist of knowledge to that of an integrator and facilitator of legal solutions) [44].

In this context, the functional characteristics of the profession are also changing. A lawyer gradually loses the role of the "universal legal expert" and becomes a highly specialized

professional at the intersection of law and digital technologies — a legal engineer, data protection officer, compliance analyst, or smart contracts auditor [45]. This requires the acquisition of new competencies, primarily digital literacy, proficiency in data analytics tools, knowledge of cybersecurity fundamentals, and skills to work in interdisciplinary environments. That is why leading universities around the world — including Stanford Law School, MIT, and the European University Institute — are actively integrating courses on legal design, legal innovations, digital ethics, and programming for lawyers into their curricula)[46].

However, with the development of digitalization, new challenges arise. Lawyers face the need to address ethical dilemmas that have no analogs in traditional practice. In particular, this concerns the responsibility for the consequences of decisions made by algorithms; issues of confidentiality in the context of working with cloud databases; and the problem of algorithmic discrimination resulting from biased data used to train artificial intelligence systems. The European Commission for the Efficiency of Justice, in the "European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems)[47] " notes that digitalization must be based on the principles of non-discrimination, transparency, fairness, and respect for human rights.

Today, there is a need for the integration of disciplines that encompass IT law, data protection, legal regulation of artificial intelligence, LegalTech, virtual (digital) persona, and more)[48]. The law school of the future must not only train experts in legal statutes but also specialists capable of critical thinking, adapting to digital changes, and adhering to ethical standards in an era of rapid societal transformation.

Thus, the role of the lawyer in the digital age is rapidly changing: from a traditional consultant to a digital expert, from a knowledge monopolist to a curator of technological solutions. At the center of this transformation, however, must remain not the technology itself, but the person, their rights, and their interests. The future of both the legal profession and the rule of law as a whole depends on how well a lawyer can integrate innovations into their practice while preserving ethics, humanism, and professionalism.

In this context, the analysis of the impact of individual digital technologies on specific segments of legal activity becomes especially relevant. One of the most debated and simultaneously practically significant topics is the use of artificial intelligence in court proceedings. Such a tool has the potential to transform not only decision-making processes but also the very nature of judicial proceedings, raising new legal dilemmas in the process. One of the key issues among these is the problem of conflicts of interest.

The use of artificial intelligence in judicial proceedings gives rise to a number of ethical, legal, and procedural challenges, among which the issue of conflict of interest occupies a central position. Traditionally, a conflict of interest arises when an individual performing professional duties has a private interest that may influence the impartial execution of those duties. In the context of AI application, this category takes on new forms, as decisions or analytics generated by algorithms can be highly influential—sometimes even decisive—in the judicial process, despite their opacity and lack of legal status.

First and foremost, a potential source of conflict of interest may be the software developed or maintained by private companies that have a vested interest in promoting and monetizing their products within the judicial system. For instance, if a court uses an analytical platform created by a company that also provides services to other parties in the proceedings (such as lawyers, experts, or insurers), this raises concerns about the neutrality of the algorithm. Such technologies may contain built-in biases or favor certain behavioral models or risk assessments.

Another critical issue is algorithmic opacity. Decisions made by artificial intelligence are often the result of processing large datasets through complex models (such as machine learning), whose internal logic may be difficult to interpret—even for specialists. If a judge or party to the case is unable to assess why a particular decision or prediction was generated, there is a risk of unintentionally delegating judicial authority to a machine, which directly contradicts the principle of independent and impartial adjudication.

A potential conflict of interest also arises in relation to the data providers whose datasets are used to train AI systems. If the training data is discriminatory or structurally biased—for instance, historical court decisions that systematically favored one party—the new system is likely to reproduce these patterns. As a result, it will operate in the interest of one group, thereby violating the principles of equality of arms and fair trial [48].

In some countries, the need for legislative regulation to prevent conflicts of interest in the use of AI in the justice system is already under discussion. For example, the draft EU Artificial Intelligence Act includes a requirement that high-risk systems, particularly in the field of justice, must undergo mandatory certification, possess transparent architecture, and be audited for bias. The document also emphasizes the necessity of preserving human oversight in final decision-making, which is specifically aimed at minimizing the impact of conflicts of interest[49].

In practical terms, it is worth mentioning the case of *State v. Loomis*[52], in which the defendant challenged the use of the COMPAS algorithm—a tool that assessed the risk of recidivism and influenced the sentencing decision. The court upheld the admissibility of such use but expressed concern over the lack of transparency of the algorithm, which was developed by a private company and did not provide access to its internal logic. This case exemplifies a situation where the developer's trade secret conflicts with an individual's right to a fair defense.

Thus, the conflict of interest in the use of AI in judicial proceedings is a multidimensional phenomenon, encompassing both institutional threats (such as the influence of technology providers) and procedural risks (including lack of transparency and bias). Minimizing these risks requires clear ethical standards, legislative constraints for both developers and users of such systems, and the assurance of transparency, accountability, and the right to appeal decisions made with the involvement of artificial intelligence.

Despite the many advantages AI can offer to the justice system, its application inevitably raises complex legal, ethical, and procedural challenges. Among the most critical is the safeguarding of the right to a fair trial—a cornerstone of the rule of law. Growing concerns are being voiced about the potential infringement of this principle due to algorithmic discrimination, loss of transparency in judicial processes, and restricted access to effective legal remedies.

The principle of a fair trial, enshrined in Article 6 of the European Convention on Human Rights, guarantees every individual the right to an impartial, public, and timely hearing by an independent and unbiased tribunal. In the digital age, the implementation of this principle faces new challenges associated with the use of opaque, automated systems that either make or significantly influence judicial decisions. The emergence of so-called “algorithmic judges” or decision support tools poses the risk of losing the subjective assessment of each individual case, which lies at the heart of justice.

Algorithmic discrimination occurs when mathematical models replicate or even amplify existing societal biases embedded in the data used for their training. A well-known example is the COMPAS system, used in certain jurisdictions in the United States to predict recidivism risk. A 2016 investigative report by ProPublica revealed that the system overestimated the risk of

recidivism for Black defendants and underestimated it for white defendants, resulting in discriminatory outcomes in decisions on pretrial detention, parole, or sentencing severity)[50].

This phenomenon has a broader nature and manifests not only along racial lines but also based on gender, age, or social status. For example, in the automated analysis of résumés during recruitment processes for legal positions, AI systems have shown a tendency to favor male candidates, as historical data used in training contained a higher representation of men. If similar algorithms are employed in courts to assess the "credibility" of parties or their characteristics, this could lead to systemic discrimination against women, the elderly, minorities, or socially vulnerable groups.

It is important to emphasize that such bias is not always the result of abuse or intentional interference—it often arises from the specifics of machine learning, which replicates and reinforces patterns present in historical data. In this case, discrimination is structural and "built into" the system, yet no less harmful. The legal issue lies in the fact that these systems typically lack self-regulation mechanisms, and their operation is opaque—parties to a judicial process have no access to the decision-making logic of the algorithm, making it impossible to verify its objectivity or to submit well-founded objections.

This creates a set of new requirements for legal regulation. First, every individual must have the right to know whether automated systems were used in their case and to access the algorithmic logic and decision-making criteria. Second, there must be mechanisms for the independent review of such systems for discriminatory bias, along with regular verification and oversight.

The use of artificial intelligence in legal processes also includes the application of algorithms to predict the outcomes of court cases. Technologies such as Ravel Law and Premonition are capable of analyzing court decisions, identifying patterns, and forecasting likely outcomes based on previous cases)[51]. This enables lawyers to make more informed predictions about case results and to choose appropriate litigation strategies. In particular, these platforms can assess the probability of success before specific judges, which is extremely useful for developing case strategies and planning resources. The use of AI in judicial outcome prediction opens up new possibilities for optimizing legal processes and ensuring more predictable justice.

One of the significant advancements in legal practice is also the implementation of online platforms that provide access to legal services and create new business models for small and medium-sized enterprises. Startups such as UpCounsel and LawTrade allow users to obtain legal assistance online, making legal services more accessible and cost-effective. These platforms offer convenient access to qualified attorneys who can assist with contract drafting, compliance consultations, and other legal services)[52]. Moreover, the platforms ensure transparency in the process of obtaining legal assistance, lowering barriers for those who lack access to traditional legal consultations due to high costs or geographic remoteness.

The application of technologies in the U.S. legal sector is not without its challenges. One of the main barriers to the widespread use of legal technologies is regulatory restrictions. Since the rights and duties of lawyers are governed by strict ethical standards and laws, new technologies must meet high requirements regarding privacy protection, ethics, and ensuring fairness in the judicial process. Furthermore, the legal status of automated decisions and their adoption in court proceedings require detailed analysis and improvement, as errors in technology could lead to serious legal consequences, which raises concerns about its use in all areas of legal practice.

The prospects for the development of legal technologies in the U.S. look promising, as technologies continue to evolve and be implemented in new aspects of legal practice. The use of artificial intelligence, automation, and the digitization of legal processes promise significant

improvements in the efficiency of legal services, as well as providing access to justice for individuals who previously could not afford full legal assistance. In the future, further integration of tools such as big data, blockchain, and other technologies can be expected to significantly reduce the cost of legal services and improve the accuracy of legal decisions)[53].

In today's digital society, the transformation of the legal profession is accompanied by the emergence of new specializations that did not exist in traditional legal practice. Among them, roles such as legal engineer, legal designer, and data privacy officer (DPO) stand out most prominently. These professions arise at the intersection of law, information technology, design, and data management, requiring not only new competencies but also a rethinking of the legal status of the specialists who hold them.

A legal engineer is a professional who applies programming, automation, and data analytics to create legal tools and digital products that simplify or automate legal processes. This role emerged in response to the legal sector's need for innovation and digital solutions. For example, legal engineers develop systems for automatic contract generation, legal chatbots, risk management platforms, digital compliance systems, and more.

The legal status of this profession remains unclear in most jurisdictions, as it does not fall within the traditional categories of "lawyer" or "attorney" under professional regulation. However, within legal tech projects, legal engineers often work closely with licensed legal professionals, and the solutions they create become part of the legal practice. Researchers note that legal engineering has the potential to radically restructure legal infrastructure, particularly through the use of smart contracts and blockchain technologies)[54].

A legal designer combines legal expertise with design thinking methods to make legal services more understandable, accessible, and user-oriented. This is not just about visualizing contracts or creating "legal interfaces," but also about a comprehensive rethinking of the structure of legal processes. In this context, legal design is not merely an aesthetic tool; it is an innovation tool aimed at simplifying the legal interaction between the user and the legal system)[55].

The legal status of a legal designer is not specifically regulated in most countries, but more and more organizations recognize the need to employ such specialists on a permanent basis. They play an especially important role in the fields of human rights, access to justice, and the development of open administrative services.

On the other hand, the Data Privacy Officer (DPO) role is clearly regulated at the normative level, particularly in EU countries under the General Data Protection Regulation (GDPR). According to Articles 37–39 of the GDPR, a DPO is mandatory for public authorities and certain categories of companies that engage in systematic monitoring of data subjects or process large volumes of personal information.

Functionally, a DPO is an independent specialist responsible for ensuring the organization's compliance with personal data protection regulations, providing advice on data processing policies and procedures, and acting as a contact point for supervisory authorities and data subjects. The role includes guarantees of independence, protection against dismissal for performing professional duties, and mandatory participation in all processes involving data processing)[55].

In several countries, including Germany and France, the status of the Data Privacy Officer (DPO) is enshrined in national legislation, and their activities may require a special certification. At the same time, in some countries, the role of DPO is only beginning to gain traction, and in practice, this role is often performed by lawyers with additional qualifications in information technology.

Thus, the emergence of new legal specializations at the intersection of law, technology, and design is an inevitable consequence of the digitalization of society. These roles not only complement the traditional legal profession but also transform its paradigm. However, the legal status of such specialists remains heterogeneous and requires further normative consideration. In the context of building a digital legal state, the task is not only to recognize these new roles within the professional classification but also to establish proper standards of ethics, accountability, and professional training for them.

In the context of the development of digital technologies, there is a growing need to establish clear professional standards for their use in legal practice. The lack of regulatory frameworks could create significant risks for the quality of legal assistance as well as the protection of fundamental human rights. Therefore, it is essential to justify a set of recommendations that can serve as the basis for ethical and professional standards in the use of AI by legal professionals. These recommendations could include the following:

No artificial intelligence system should replace the final legal decision, which must be based on professional analysis, critical thinking, and ethical awareness. The lawyer must remain the responsible subject for interpreting legal norms, evaluating evidence, and making decisions.

A lawyer who applies AI must be able to explain to the client, court, or other participants in the process how the corresponding system works, what algorithmic parameters were used, what input data were provided, and how the result was obtained. Explainability is fundamental to legal predictability, procedural fairness, and accountability.

All results obtained through AI must undergo independent legal verification. The lawyer is obliged to evaluate the accuracy, completeness, and legal justification of the recommendations or conclusions provided by the algorithm.

The lawyer must ensure that the use of AI does not violate human rights, particularly the right to privacy, access to justice, and equality before the law. AI systems must be tested for algorithmic bias that could create unequal conditions for different groups of people, especially vulnerable groups.

The lawyer is responsible for the consequences of applying technologies, including the selection of the system, its settings, the confidentiality of client data, and adherence to the principle of non-maleficence (do no harm). The choice of technological tool must be based on its reliability, task suitability, and ethical profile.

The lawyer should possess a minimum level of digital literacy, knowledge of the functional capabilities and risks of AI solutions applied in the legal field. This competency should be integrated into legal education as a mandatory component.

The lawyer should support the implementation of AI models that take into account the requirements of legal regulation at the design stage: adherence to GDPR, principles of due process, procedural equality of parties, standards of fair trial, etc.

When interacting with the client, the lawyer must inform them of the use of AI in the case, explain its role, potential benefits, and risks, and provide the client with the opportunity to consent to or decline the use of such a tool.

Before using AI, the lawyer must conduct legal due diligence: determine what category of risk the specific technology belongs to under national or international legislation (e.g., the EU AI Act), and what legal precautions should be taken.

The standards for using AI in the legal field should be dynamic, reviewed in light of technological development, case law, legislative updates, and the positions of international

organizations. The lawyer is obliged to regularly update their knowledge and adapt their practice to changes in the regulatory environment.

These principles could help guide the ethical integration of AI into legal practice and ensure that the use of new technologies serves to improve access to justice while safeguarding fundamental rights.

These principles can serve as a foundation for the development of national ethical codes for digital legal practice, as well as for the formation of soft law acts within legal communities and associations.

Artificial intelligence requires new competencies from lawyers. They must possess not only legal knowledge but also an understanding of the principles behind modern technologies, such as machine learning algorithms, cybersecurity, and data protection. Consequently, the role of the lawyer in the context of digitalization is evolving from a traditional legal professional to a technological solutions integrator, combining legal expertise with technological innovations.

Overall, artificial intelligence is a powerful tool that can significantly improve the work of lawyers, but only if its use is balanced with ethical principles and a responsible approach to human rights protection. A lawyer who is able to correctly integrate these technologies into their practice will not only enhance the effectiveness of their work but also contribute to the development of the legal system in the digital age.

Thus, the current conditions present practicing lawyers with complex challenges that require them to engage with LegalTech and artificial intelligence not only as users of tools but as active participants in the digital transformation of law. This necessitates a shift from traditional approaches to legal practice and the acquisition of new interdisciplinary competencies. Working with LegalTech and AI involves several key areas:

Firstly, a lawyer must clearly understand the tasks that LegalTech platforms address—ranging from document management automation to online consultations—and those that AI tools solve, such as analyzing large volumes of legal data, predicting decisions, and generating legal texts.

Secondly, AI is not a replacement for legal thinking. A lawyer must verify the conclusions provided by AI systems, evaluate their compliance with legislation, context, and value orientations. This is especially crucial in cases where the decision derived from AI affects the future of an individual or legal entity.

Thirdly, the modern lawyer must possess skills in using software products for the creation and processing of legal documents, legal CRM systems, platforms for remote court access, electronic signature services, Legal Analytics, legal aid chatbots, and more.

Fourthly, a lawyer is responsible for the consequences of using technological solutions.

Additionally, lawyers may not only use ready-made products but also participate in their registration, draft contracts regarding the management of rights to these products, consult IT teams, model legal risks when implementing systems, and develop legal-ethical standards for LegalTech startups.

Today, lawyers need to constantly update their knowledge, take courses on digital literacy, AI law, programming for lawyers, and participate in LegalTech hackathons and legal innovation forums to remain competitive professionals.

Thus, the lawyer of the 21st century must become a professional who combines hybrid competencies: on one hand, possessing classical legal training, and on the other, having digital competence and the ability to collaborate with technical specialists to effectively implement innovations into legal practice.

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