

The Application of Artificial Intelligence in the Area of Judicial Dispute Resolution

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The article explores the growing role of Artificial Intelligence in dispute resolution, by focusing on the way(s) how it is transforming traditional legal processes. By automating tasks such as legal research, case prediction, and even decision-making, AI is being increasingly integrated into judicial proceedings and the activities that surround them. The work examines both the potential benefits – such as an increased efficiency, reduced costs, and an enhanced access to justice – and the challenges, including concerns about fairness, transparency, and accountability. It also addresses the ethical and legal implications of delegating human judgment to algorithms, raising critical questions about discrimination, bias, and the need for clear regulation. This article aims to provide a comprehensive understanding of AI's impact on dispute resolution and offer insights into how legal professionals and policymakers can navigate the evolving landscape of justice.

Keywords: Artificial Intelligence, judicial dispute resolution, access to justice, legal technology, administration of justice.

Dirbtinio intelekto taikymas teisminių ginčų sprendimo srityje

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Straipsnyje nagrinėjamas didėjantis dirbtinio intelekto vaidmuo ginčų sprendimo procese, daugiausia dėmesio skiriant tam, kaip jis transformuoja tradicinius teisinius procesus. Automatizuodamas tokias užduotis kaip teisiniai tyrimai, bylų baigties prognozavimas ir net sprendimų priėmimas, dirbtinis intelektas vis plačiau integruojamas į teisinius procesus ir su jais susijusią veiklą. Straipsnyje analizuojama tiek galima nauda – didesnis efektyvumas, mažesnės sąnaudos ir geresnė prieiga prie teisingumo, tiek kylantys iššūkiai, įskaitant susirūpinimą dėl teisingumo, skaidrumo ir atskaitomybės užtikrinimo. Taip pat aptariami etiniai ir teisiniai padariniai, susiję su žmogaus sprendimų priėmimo funkcijų perdavimu algoritmams, keliant svarbius diskriminacijos, šališkumo ir reguliavimo sistemų poreikio klausimus. Straipsnio tikslas – suteikti išsamų supratimą apie dirbtinio intelekto poveikį ginčams spręsti ir pateikti įžvalgų, kaip teisės specialistai bei politikos formuotojai gali prisitaikyti prie kintamos teisingumo sistemos aplinkos.

Pagrindiniai žodžiai: dirbtinis intelektas, teisinis ginčų sprendimas, teisingumo prieinamumas, teisinės technologijos, teisingumo vykdymas.

Received: 08/06/2026. **Accepted:** 29/06/2026

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Introduction

The rapid development of digital technologies has become one of the defining features of the contemporary era. Over the past decade, innovations such as blockchain, smart contracts, and online communication platforms have significantly transformed social relations. Among these developments, Artificial Intelligence has emerged as one of the most transformative technologies. The concept of ‘smart machines’ has always been a popular theme in science fiction, but, in recent years, these technologies have entered the mass market.

AI technologies are being increasingly integrated into various aspects of judicial activity, including legal research, practice analysis, case management, evidence review, predictive analytics, risk assessment, and document drafting. On the one hand, such developments offer opportunities to improve the efficiency of judicial systems. On the other hand, they raise concerns about the potential replacement of human judgment and the transformation of adjudication into an algorithmic process.

The introduction of AI into dispute resolution has therefore been met with both enthusiasm and caution. While technical specialists tend to focus on the capabilities and performance of AI systems, legal scholars and practitioners are bound to address broader questions. These include AI’s compatibility with the already existing frameworks, its impact on constitutional principles and human rights, and the ethical challenges associated with its use.

Given the rapid pace of technological development, the increasing use of AI in the legal domain appears to be irreversible. This makes the topic of the present article highly relevant, particularly considering the evolving, still-incomplete regulation of the area.

The object of this study is the application of Artificial Intelligence to judicial dispute resolution. The article deliberately excludes extrajudicial mechanisms from its scope due to differences in their nature, structure, legal regulation, and the degree of AI impact on them. These less formal methods will be examined in a subsequent study.

The article’s primary aim is to analyze the potential and limitations of AI in judicial procedures. It pursues the following objectives: (1) to clarify the concept and main types of Artificial Intelligence relevant to legal practice; (2) to analyze the main areas and forms of AI application in dispute resolution; (3) to identify and evaluate the key challenges associated with its use; and (4) to propose possible approaches for addressing these challenges through legal, technical, and institutional measures.

The research is based on doctrinal, comparative, and interdisciplinary methods. The doctrinal approach is used to analyze legal norms, regulatory frameworks, and scholarly literature related to AI and dispute resolution. Comparative analysis is applied to examine different legal approaches to AI regulation and its application across jurisdictions. Finally, an interdisciplinary perspective is employed to integrate insights from law, technology, and ethics, enabling a comprehensive assessment of AI’s role in contemporary dispute-resolution systems.

The topic of AI in the legal field, including dispute resolution, is not new. The authors in this area include R. Abbott, H. Alessa, D. Carneiro, E. Katsh, O. Rabinovich-Einy, and others. Among Lithuanian authors, relevant publications have been made by J. Bartkus, A. Doržinkevič, N. Gaubienė, A. Limantė, D. Murauskas, E. Tamošiūnienė, Ž. Terebeiza, and M. Šukytė. However, most works cover Alternative and Online Dispute Resolution. Additionally, many publications primarily describe the role of technology in preparing for the trial, predicting its outcomes, or assisting justice. This article, on the other hand, discusses the whole procedure from the pre-trial stage through its examination in court to the pronouncement of the final judgment.

1. The Concept and Typology of Artificial Intelligence

The concept of Artificial Intelligence is not new. It emerged in the 1950s as a field of academic inquiry and practical experimentation and has gradually developed into a distinct area of study within computer science, philosophy, and, more recently, law¹. Despite decades of research and application, artificial intelligence remains a term without a universally accepted definition².

One of the most common approaches describes it as the imitation of human intellectual and sensory abilities, including reasoning, learning, language processing, and perception³. However, as scholars have observed, computer programs are structured and function on fundamentally different principles than the human brain, and any parallels in their activities are largely a matter of human perception rather than internal equivalence⁴.

Others emphasize that AI is not merely about mimicking human reasoning but also about automating and delegating cognitive tasks to machines. The key feature of the machine is its ability to learn and discover new methods for achieving results without being explicitly programmed⁵. This creative dimension distinguishes AI from simple automation, which is already present in modern life. At the same time, not all AI systems require full automation. Some of them are designed to work under human control⁶.

Artificial Intelligence, in fact, encompasses a variety of technologies and algorithms that may be used to analyze data, draw inferences, and make predictions⁷. Among them, specialists identify rule-based systems and expert systems, machine learning, natural language processing, computer vision, generative AI, and predictive analytics⁸.

There is a distinction between general (or strong) AI and narrow (or weak) AI. Narrow AI is designed to solve a specific task for which it was created. In law, it can help analyze texts such as statutes and judicial decisions and draw conclusions from them. Narrow AI can outperform an average specialist within its domain but remains limited to that specific sphere of application. Strong AI, on the other hand, would theoretically possess the cognitive capabilities of a human being and be able to solve problems creatively and flexibly, by applying knowledge from different areas to a given problem⁹. Although modern generative models may already appear to exhibit human-like capabilities, they remain dependent on predefined training. They lack true self-awareness and autonomous reasoning in the human sense. It is generally believed that strong AI will only become possible in the future¹⁰.

¹ TEWARI, Jolly; BOSE, Malobika (2023). History of Artificial Intelligence. *Indian Journal of Law and Legal Research*, 5(2), 1–2.

² WEITZEL, Paul. (2026). Defining Artificial Intelligence. *Wayne Law Review*, 71(2), 366.

³ ASHLEY, Kevin (2017). *Artificial Intelligence and Legal Analytics*. Cambridge: Cambridge University Press, p. 23.

⁴ SURDE, Harry (2019). Artificial Intelligence and Law: An Overview. *Georgia State University Law Review*, 35(4), 1308.

⁵ WEITZEL, Paul. (2026). Defining Artificial Intelligence. *Wayne Law Review*, 71(2), 381–382.

⁶ SURDE, Harry (2019). Artificial Intelligence and Law: An Overview. *Georgia State University Law Review*, 35(4), 1308.

⁷ ZÚÑIGA, Homero Gil; GOYANES, Manuel and DUROTOYE, Timilehin (2023). A Scholarly Definition of Artificial Intelligence (AI): Advancing AI as a Conceptual Framework in Communication Research. *Political Communication*, 41, 320–321.

⁸ LEVY, Karen; CHASALOW, Kyla; RILEY, Sarah (2021). Algorithms and Decision-Making in the Public Sector. *Annual Review of Law and Social Science*, 17, 311.

⁹ LIMANTĖ, Agnė; ŠUKYTĖ, Monika and GAUBIENĖ, Neringa (2025). *Dirbtinis intelektas teismuose: teorija, praktika ir teisinis reguliavimas*. Vilnius: Lietuvos socialinių mokslų centro Teisės institutas, pp. 24–25.

¹⁰ TAMOŠIŪNIENĖ, Egidija; TEREBEIZA, Žilvinas and DORŽINKEVIČ, Artur (2024). The Possibility of Applying Artificial Intelligence in the Delivery of Justice by Courts. *Baltic Journal of Law and Politics*, 17(1), 212.

The approaches listed above are mostly technical aspects of the issue. The legal definitions, by contrast, are more concerned with the way(s) how the technology is applied in practice, and with its impact on relations among individuals, institutions, and the State¹¹. The law not only defines what AI is but also sets down requirements for what it should be and establishes limitations on its application. Thus, the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment requires that AI tools and systems should comply with human rights standards, avoid discrimination between individuals and groups, provide for transparency, impartiality, and fairness, ensure quality and security, and remain under the informed control of the user¹². Another important normative definition is that of the EU Artificial Intelligence Act, according to which an ‘AI system’ means “a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments”¹³. The Act further applies risk-based classification to the systems, putting the systems in the area of administration of justice into the high-risk category. This regulatory approach reflects the recognition that AI systems deployed in judicial contexts can significantly affect fundamental rights and must therefore be subject to heightened scrutiny and safeguards.

In summary, Artificial Intelligence is a multifaceted and evolving concept, encompassing a range of methods with varying levels of sophistication, autonomy, and adaptiveness. The absence of a universally accepted definition reflects both the diversity of the concept and its interdisciplinary nature. Understanding the different types and classifications of AI is essential for assessing its role and implications in dispute resolution, particularly given the legal and ethical challenges it raises.

2. Merging Artificial Intelligence with Dispute Resolution

2.1. Defining dispute resolution and its types

Disputes may be generally defined as conflicts between persons or social groups over rights and interests. Since ancient times, societies have developed methods to resolve them peacefully, while recognizing that effective dispute resolution is essential to social well-being. The resolution of disputes is therefore regarded as one of the central functions of law and, arguably, its most fundamental purpose¹⁴.

Judicial procedure remains the primary and most developed form of dispute resolution. Only courts possess the constitutional authority to administer justice on behalf of the State¹⁵. The judiciary performs functions that extend beyond the resolution of individual disputes: interpretation and development of the law, protection of constitutional principles and fundamental rights, ensuring the legality of actions undertaken by other state authorities, and contributing to legal doctrine through precedent.

¹¹ ABBOTT, Ryan (2020). Putting the Artificial Intelligence in Alternative Dispute Resolution: How AI Rules Will Become ADR Rules. *Amicus Curiae (Series 2)*, 4(3), pp. 690–693.

¹² European Commission for the Efficiency of Justice (CEPEJ). 2018. European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment. Council of Europe, Strasbourg, 3–4 December 2018.

¹³ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828. *OJ L*, 2024/1689, pp. 1–144 (Art. 3(1)).

¹⁴ ALESSA, Hibah (2022). The Role of Artificial Intelligence in Online Dispute Resolution: A Brief and Critical Overview. *Information & Communications Technology Law*, 31(3), 320.

¹⁵ Lietuvos Respublikos teismų įstatymas. 1994 m. gegužės 31 d. Nr. I-480. *Valstybės žinios*, 1994-06-17, Nr. 46-851.

Despite its institutional importance, judicial procedure is often criticized for excessive complexity, rigidity, length, and financial costs. For these reasons, informal methods of dispute resolution (negotiation, mediation, arbitration) have become increasingly important in practice. These mechanisms are valued for their flexibility, confidentiality, speed, lower costs, and a greater emphasis on cooperation as well as consensual settlement. In certain types of disputes, particularly commercial, family, or labor, they may provide more effective and more acceptable outcomes than traditional litigation.

Recent technological developments have affected both judicial and extrajudicial dispute resolution. However, the scope, purpose, and constraints on technology implementation differ between formal and informal mechanisms. The latter are generally more flexible, adaptable, and subject to rapid change. They are often privately financed and can adopt new technologies without the procedural, constitutional, or budgetary constraints that affect courts¹⁶. Judicial systems, by contrast, are deeply rooted in constitutional principles that are difficult to set aside. Courts must ensure broad public access, provide procedural protections, maintain multiple levels of review, and preserve judicial independence along with impartiality. These requirements limit the speed and manner in which courts can adopt technological innovation. Any technological tool introduced into judicial proceedings must be compatible with constitutional safeguards, procedural fairness, and the rule of law. This imposes normative and institutional constraints that do not apply to the same degree in informal dispute resolution.

2.2. Justification for the introduction of AI into judicial procedures

In recent years, Artificial Intelligence has been introduced into many areas of social life, and it was only a matter of time before this development would reach the courts. The recourse to AI in courts can be justified only where it addresses persistent structural problems that cannot be effectively resolved by already existing means¹⁷.

Judicial systems across the world are facing a combination of increasing caseloads, procedural delays, staffing shortages, limited budgets, procedural complexity, and barriers to access to justice. These challenges undermine the ability of courts to deliver timely and effective justice, erode public confidence in legal institutions, and may, in practice, deprive individuals of their right to a fair and expeditious hearing¹⁸. Cost constitutes an additional and closely related problem. On the institutional side, courts require substantial public resources to function effectively. Meanwhile, on the individual side, high costs restrict access to legal representation and can effectively exclude significant segments of the population from participation in the legal system. This dynamic has been described as creating a ‘two-tiered’ system, in which those who can afford professional legal assistance obtain adequate protection of their rights, while others are left to navigate complex procedures alone¹⁹.

AI appears to be a potential tool for addressing these deficiencies. If properly designed and deployed, AI systems can enhance efficiency by automating routine tasks, thus reducing the time required

¹⁶ The Relationship between Formal and Informal Justice: The Courts and Alternative Dispute Resolution (Statement of the European Law Institute and of the European Network of Councils for the Judiciary) (n.d.) European Law Institute [online]. https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ADR_Statement.pdf

¹⁷ UN Special Rapporteur on the Independence of Judges and Lawyers, *AI in Judicial Systems: Promises and Pitfalls*, A/80/169 (2025); DONATI, Filippo (Dec 01, 2025). The Use of Artificial Intelligence in Judicial Systems: Ethics and Efficiency [online]. https://www.julia-project.eu/sites/default/files/2025-12/DONATI_JuLIA_Use%20of%20AI%20in%20Judicial%20Systems.pdf

¹⁸ BERUASHVILI, Magda (2025). The Capabilities and Challenges of Artificial Intelligence in the Justice System. *Law And World*, 11(3), 148.

¹⁹ SIMSHAW, Drew (2022). Access to A.I. Justice: Avoiding an Inequitable Two-Tiered System of Legal Services. *Yale Journal of Law & Technology*, 24, 170.

for processes, enabling court staff to manage large datasets and analyze information more quickly, and allowing human resources to be redirected toward substantive work²⁰. They may improve access to justice by lowering transaction costs, providing automated guidance and information to self-represented litigants, and making judicial services more accessible to individuals who are currently underserved²¹. AI tools can also contribute to greater consistency and predictability by identifying patterns across large numbers of cases, flagging relevant precedents, and supporting judges in the uniform application of law.

Some also argue that AI tools may, under certain conditions, provide a more neutral and consistent evaluation of facts than human decision-makers²². Empirical studies have shown that judicial decision-making can be influenced by a range of cognitive biases and contextual factors, leading to inconsistent or prejudiced outcomes. Delegating specific evaluative tasks to algorithms could reduce the impact of such biases by constraining discretion in routine or highly standardized assessments²³.

However, it is essential to emphasize that none of these advantages is guaranteed. The benefits of AI depend on how the systems are designed, implemented, and governed. Recent scholarship underscores that the legitimacy of AI in judicial decision-making turns less on the mere presence of technology than on the normative and institutional framework within which it operates²⁴.

2.3. The ways of application of AI

Before examining specific applications of AI in judicial procedures, it is important to clarify that not every technology used in courts amounts to Artificial Intelligence. Digital transformation of the judiciary has been underway for decades and has produced a wide range of tools that automate or digitize existing processes without involving learning, inference, or adaptive capabilities. They are therefore better characterized as digitalization rather than as Artificial Intelligence²⁵.

The solutions offered by contemporary Artificial Intelligence technologies, in their turn, are numerous and may be classified according to various criteria.

The first classification focuses on the users. Judges and clerks may use AI for legal research, evidence organization, anonymization of judgments, draft preparation, scheduling support, or procedural communication with parties. Lawyers may use it to analyze case law, structure arguments, or prepare submissions. Experts may rely on domain-specific AI in medicine, engineering, or finance. Litigants may use online systems to obtain preliminary guidance before going to court²⁶.

Next, AI may be classified by its depth of involvement. Low-level tools support routine functions such as document sorting, deadline tracking, transcription, or summarization. More advanced tools

²⁰ BARNETT, Jeremy; TRELEAVEN, Philip (2018). Algorithmic Dispute Resolution – The Automation of Professional Dispute Resolution Using AI and Blockchain Technologies. *The Computer Journal*, 61(3), 400.

²¹ CHUNG, Yongkyun (2020). ‘Artificial Intelligence’ Acceptability in Online Dispute Resolution: A Comparison Study of Korean Age Groups. *Journal of Arbitration Studies*, 30(3), 109.

²² RABINOVICH-EINY, Orna; KATSH, Ethan (Apr 20, 2021). *Artificial Intelligence and the Future of Dispute Resolution: The Age of AI-DR* [online]. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3830033.

²³ BARTKUS, Jurgis (2023). AI v. Arbitrator: How can the Exclusion of Evidence Increase the Appointments of the Arbitrators? *Access to Justice in Eastern Europe*, 1(18), 115.

²⁴ CARNAT, Irina (2024). Addressing the Risks of Generative AI for the Judiciary: The Accountability Framework(s) under the EU AI Act. *Computer Law & Security Review*, 55.

²⁵ ERMAKOVA, Elena and FROLOVA, Evgenia. Using Artificial Intelligence in Dispute Resolution. In: INSHAKOVA, Agnessa and FROLOVA, Evgenia (eds.) (2022). *Smart Technologies for the Digitisation of Industry: Entrepreneurial Environment*. Singapore: Springer, p. 140.

²⁶ Bloomberg Law (n.d.) *Legal AI Designed for Decisions* [online]. <https://pro.bloomberglaw.com/products/ai-and-bloomberg-law/>

estimate outcomes, suggest sentencing ranges, compare draft decisions against prior case law, or classify claims²⁷. In a few experimental settings, AI has even been tested for low-value claims with limited human intervention, though final responsibility remains with human judges²⁸.

Another classification focuses on the levels of AI application in the procedure: information, analysis, decision support, and adjudication. The last two levels are already reached in practice in certain jurisdictions. Thus, in China, ‘Smart Courts’ use AI to compare draft judgments with a central database and warn judges if their reasoning departs from the established patterns²⁹. In the EU, the European Order for Payment procedure explicitly allows the preliminary examination of applications to be automated³⁰. For a small number of cases, the nature of AI involvement may reach a quasi-adjudicative level, especially in small or low-value claims. Estonia, for example, has tested systems intended to resolve minor civil disputes with minimal human intervention, with appeals to a human judge. In such arrangements, AI effectively issues a preliminary decision, but formal authority and ultimate responsibility will remain with human courts³¹.

The attempted classifications in this section show that AI in judicial dispute resolution is not a single technology with a sole task, but rather a collection of tools and technological solutions with different users, functions, and levels of impact on the procedure. For the legal analysis, the crucial questions are therefore not only what AI can do, but also who controls it, at which stage of the process, and to what degree it influences the final decision.

3. Challenges and Risks of AI in Judicial Proceedings

Although Artificial Intelligence offers considerable potential to enhance the efficiency and accessibility of dispute resolution, its use in judicial proceedings raises complex legal, ethical, and technical issues.

3.1. Potential negative impact on access to justice

AI is often presented as a way to improve access to justice³². While the benefits are real, AI can also create new forms of exclusion and inequality, especially when an ‘access to justice’ is quietly reduced to an ‘access to technology’.

Many potential users lack the digital literacy, devices, or stable connection needed to benefit from AI-assisted systems. If digital systems become the default pathway into court, those who cannot use them effectively are disadvantaged from the outset. In such cases, AI does not remove barriers to justice, but, instead, redistributes them, thus creating a ‘digital divide’.

²⁷ ALESSA, Hibah (2022). The Role of Artificial Intelligence in Online Dispute Resolution: A Brief and Critical Overview. *Information & Communications Technology Law*, 31(3), 326; LEGG, Michael and BELL, Felicity (2019). Artificial Intelligence and The Legal Profession: Becoming the AI-enhanced Lawyer. *University of Tasmania Law Review*, 38(2), 54.

²⁸ MALGIERI, Gianclaudio and PASQUALE, Frank (2024). Licensing High-risk Artificial Intelligence: Toward *ex ante* Justification for a Disruptive Technology. *Computer Law & Security Review*, 52, 2–3.

²⁹ ZHENG, George (2020). China’s Grand Design of People’s Smart Courts. *Asian Journal of Law and Society*, 7(3), 561–565.

³⁰ Regulation No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure. OJ L 399, 2006, pp. 1–32 (Art. 8).

³¹ Estonia’s AI Judge Reimagines Justice (2025). *Innovation Library* [online]. <https://innovationlibrary.com/articles/estonia-is-asking-can-justice-come-from-code-not-a-courtroom>

³² BLACK, Nicole (2025-01-24). *Access to Justice 2.0: How AI-powered Software Can Bridge the Gap* [online]. <https://www.americanbar.org/groups/journal/articles/2025/access-to-justice-how-ai-powered-software-can-bridge-the-gap/>

Current developments may deepen the gap between high-income and lower-income litigants. The advanced AI solutions are likely to be used by those who already rely on technology, know how to use it, and can afford continuous access or integration into their workflows. Less affluent individuals are more likely to rely on generic tools or to have no AI assistance at all³³.

A further asymmetry concerns those who design and control the algorithms. Developers and providers of AI tools may have detailed insight into how the systems function and, in extreme cases, could adjust parameters in ways that indirectly favor certain types of users or outcomes. Even without intentional manipulation, the informational advantage enjoyed by those behind the technology can distort the balance of power³⁴.

Certain concerns may arise in the relationship between courts and *Alternative Dispute Resolution* (ADR). ADR providers are more flexible and quicker to adopt new tools, so technologically advanced mediation or arbitration platforms may attract users away from state courts. Over time, it may increase demand and costs in the ADR sector, thus potentially pricing some users out. At the same time, public courts may come to focus disproportionately on digitally excluded groups, with fewer resources and less incentive to innovate, consequently deepening institutional disparities. In cross-border litigation, we may witness a similar competition between jurisdictions, with the most technologically advanced countries attracting litigation while resource-constrained countries are left behind.

3.2. Explainability of AI systems

Many contemporary AI systems, especially those based on machine learning, lack explainability. They can produce highly influential outputs and yet fail to provide the reasoning behind them. This is often described as the ‘black box’ problem: observers see the input and the output but cannot reconstruct the path between them. Lack of transparency does not stem only from technical complexity. It is frequently reinforced by commercial secrecy, as many AI tools used in practice are developed by private companies that protect their intellectual property³⁵. Requiring full open-source disclosure for all such systems could, in turn, raise concerns about innovation and investment, so a balance must be struck between transparency, competition, and fundamental rights.

In judicial dispute resolution, opacity is particularly problematic because the legitimacy of adjudication depends on reason-giving. Reasoned decisions allow parties to understand why they have won or lost, enable appellate review, constrain arbitrariness, and affirm the public character of justice. If AI systems materially influence judicial outcomes but their operation cannot be adequately explained, the principle of a fair trial is put at risk. This principle lies at the core of judicial dispute resolution and is firmly anchored in International Law³⁶. In the context of Lithuanian domestic law, the Code of Civil Procedure requires that all judgments be ‘lawful and justified’, and that courts must base their decisions solely on evidence and circumstances examined at the hearing³⁷. Reliance on opaque mate-

³³ QUINTANILLA, Victor; HUGENBERG, Kurt; HAGAN, Margaret et al. (2023). Digital Inequalities and Access to Justice. In: ENGSTROM, David (ed.) *Legal Tech and the Future of Civil Justice*. Cambridge: Cambridge University Press, p. 230–231.

³⁴ BUCHER, Andrea (May 06, 2025). Navigating the Power of Artificial Intelligence in the Legal Field [online]. <https://houstonlawreview.org/article/137782-navigating-the-power-of-artificial-intelligence-in-the-legal-field>

³⁵ VAROŠANEC, Ida (Nov 17, 2022). *Silence is Golden, or Is It? Trade Secrets versus Transparency in AI Systems* [online]. <https://digi-con.org/silence-is-golden-or-is-it/>

³⁶ Tarptautinis pilietinių ir politinių teisių paktas (1966). *Valstybės žinios*, 2002, 77-3288 (14 str.); Europos žmogaus teisių ir pagrindinių laisvių apsaugos konvencija (1950). *Valstybės žinios*, 1995, 40-987 (6 str.); Europos Sąjungos pagrindinių teisių chartija (2000). *Europos Sąjungos oficialusis leidinys*, 2012, C 326, 391-407 (47 str.)

³⁷ Lietuvos Respublikos civilinio proceso kodeksas. *Valstybės žinios*, 2002-04-06, Nr. 36-1340 (263(1) str., 270(4) str.).

rial – whether in the form of unexplained expert opinions or non-transparent AI outputs – sits uneasily with the presently mentioned requirements.

Legal technologists are developing ‘explainable AI’ (xAI) and decision-support tools that shed light on how outputs are generated. Explainable systems can, in principle, give judges interpretable outputs that highlight the key factors or data points behind a recommendation, making it easier to scrutinize and, where appropriate, reject it³⁸. However, explainability is not only a technical matter. What matters legally is whether decision-makers and affected persons receive an explanation they can use for scrutiny, and not whether an engineer can describe the model’s inner workings. Dense technical detail about architecture or training data rarely serves this purpose. From a legal perspective, explainability must involve reasons accessible to a reasonably informed layperson, who is capable of being tested in adversarial argument and reviewed on appeal³⁹. Without such person-centered transparency, the use of AI in judicial proceedings risks undermining both fairness and legitimacy of adjudication⁴⁰.

3.3. Bias and discrimination

The AI systems are trained on existing data to learn patterns, classify information, and predict outcomes. Their performance, however, cannot exceed the quality and representativeness of the data on which they are built. Training data may embed historical inequalities and structural distortions, including selective enforcement practices and institutional prejudice. Data may be incomplete, unbalanced, or outdated, leading models to reproduce patterns that no longer reflect the current standards or social realities.

Bias can also be introduced deliberately or unconsciously during the system design⁴¹. When algorithms are developed and tuned by private companies, they may reflect the commercial priorities of their creators, which are not necessarily neutral or aligned with the public law principles⁴².

If such systems are deployed systematically in particular types of proceedings, their biases risk being institutionalized. In a judicial context, this is especially serious because AI outputs can influence decisions about liberty, property, access to procedural opportunities, and the credibility of parties and witnesses. An algorithm might, for example, systematically classify certain claims as less urgent, predict higher risk for particular groups, or flag some cases for closer scrutiny, simply because historical data reflect past discrimination rather than current norms.

Upon recognizing these dangers, key soft-law instruments have placed non-discrimination at the center of their guidance. The European Ethical Charter explicitly requires that AI tools in courts be designed and used in a manner compatible with equality and human rights. It stresses that systems must not create or reinforce discrimination on grounds such as race, gender, or the socioeconomic status, and calls for ongoing monitoring, transparency, and human oversight to ensure that algorithmic assistance does not undermine the foundational principle of equal justice under law⁴³. It must

³⁸ DEEKS, Ashley (2019). The Judicial Demand for Explainable Artificial Intelligence. *Columbia Law Review*, 119(7), 1829–1830.

³⁹ GAUBIENĖ, Neringa (2024). Can Artificial Intelligence Engage in the Practice of Law as the Art of Good and Justice? *Filosofija. Sociologija*, 35(2), 60.

⁴⁰ G’SELL, Florence. AI Judges. In: DIMATTEO, Larry; PONCIBÒ, Cristina et al. (eds.) (2022). *The Cambridge Handbook of Artificial Intelligence*. Cambridge: Cambridge University Press, p. 351.

⁴¹ TAMOŠIŪNIENĖ, Egidija; TEREBEIZA, Žilvinas and DORŽINKEVIČ, Artur (2024). The Possibility of Applying Artificial Intelligence in the Delivery of Justice by Courts. *Baltic Journal of Law and Politics*, 17(1), 219.

⁴² GRAVETT, Willem (2021) *The dark side of artificial intelligence: challenges for the legal system* [online]. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/dark_side_of_artificial_intelligence.html

⁴³ European Commission for the Efficiency of Justice (CEPEJ). 2018. *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment*. Council of Europe, Strasbourg, 3–4 December 2018.

be highlighted, however, that the AI systems should be initially developed with the goal of ensuring non-discrimination, and they should be checked for potential bias before being released on the market and introduced to the courts.

3.4. Mistakes attributed to technological imperfection

Contemporary generative AI systems are known to ‘hallucinate’: they can produce false or fabricated outputs with confidence and plausibility. In everyday use, this may be inconvenient; whereas, in judicial proceedings, it is dangerous, because fictitious citations, incorrect procedural statements, or distorted summaries of evidence can undermine the integrity of adjudication. A prominent example is *Mata v. Avianca* (US), where a lawyer submitted a brief that relied on several decisions that, on review, did not exist; the cases and quotations had been generated by a large language model and used without adequate verification⁴⁴. Generative AI does not access a verified database of law but predicts likely strings of text based on training data that mix legal materials with commentary, foreign law, fiction, and social-media content, while performing no internal legality or truth checks.

Experience since *Mata* shows that this was not an isolated event: courts in the US and elsewhere have received submissions containing non-existent or distorted authorities generated by AI tools⁴⁵. In response, some have imposed sanctions on lawyers and parties who file unverified AI-generated content and have begun requiring certification of citation accuracy or disclosure of AI use. Such reactive measures may cause problem: judges whose first exposure to AI is through blatant misuse may develop a general suspicion of technological assistance that hinders beneficial applications.

Inaccuracy is not limited to hallucinated citations. Even when models do not ‘invent’ sources, they may misclassify claims, conflate different legal systems, or fail to distinguish a binding precedent from persuasive authority. Many tools struggle with long or complex documents, or with integrating late-arising facts. Judicial disputes, however, are embedded in rich human contexts that do not always fit structured datasets. An AI system may detect patterns in past decisions and yet fail to see why the present case is exceptional, why a similar precedent is constitutionally inapplicable, or why equity requires a different outcome. The closer AI comes to the core of adjudication, the more problematic full reliance on it becomes⁴⁶.

These limitations mean that judges and lawyers should treat AI outputs as aids rather than authorities, while verifying them against the record and the law and being ready to disregard them whenever they conflict with legal standards, common sense, or the demands of fairness⁴⁷.

3.5. Encroachment upon the independence and impartiality of the judge

The principles of judicial independence and impartiality are among the most fundamental guarantees of a fair trial. At first sight, it may appear that if AI tools are used only in an ‘assistive’ manner, there is no serious risk to these principles. Closer analysis shows that even non-autonomous systems can exert significant pressure on the principles how judges decide cases.

⁴⁴ *Mata v. Avianca, Inc.*, 678 F.Supp.3d 443 (S.D.N.Y. 2023).

⁴⁵ Humanoid Liability Law (Dec 09, 2025) *Legal AI Hallucinations: Cases, Ethics Rules, and Risk Management* [online]. <https://humanoidliabilitylaw.com/resources/legal-ai-hallucinations/>

⁴⁶ MCCARL, Ryan (2022). The Limits of Law and AI. *University of Cincinnati Law Review*, 90(3), 942.

⁴⁷ VARGHESE, John (2025). *Artificial Intelligence Assisted Judicial Processes – A Primer* [online]. <https://ssrn.com/abstract=5056102>.

Extensive reliance on AI outputs can subtly influence judicial reasoning. Judges may become inclined to defer to algorithmic recommendations, particularly when these are presented as objective, data-driven, or scientifically justified. This tendency, which is often described as ‘automation bias’, reflects a human inclination to trust technological outputs even where independent evaluation would be appropriate⁴⁸. Over time, a tool introduced merely as an aid may come to shape case outcomes in ways that are difficult to detect or challenge, especially for the parties involved.

Historically, the ideal of judgment ‘by one’s peers’ has been central to conceptions of fair justice. The famous clause of *Magna Carta*, which states that no free man shall be harmed “except by the lawful judgment of his equals”⁴⁹, originally referred to trial by jury but has come to symbolize the requirement that legal consequences follow from human judgment rather than opaque power. In contemporary terms, this can be interpreted as the expectation that, even in a highly digital environment, final decisions in judicial proceedings must be taken by human judges who can understand the parties, weigh arguments, and give reasons in the specific case.

3.6. Algorithmization of law and loss of its human character

Some argue that law can and should be made much closer to a computer code. On this view, ‘machine-readable law’ would resemble programming commands, with precise conditions and unambiguous consequences, so that algorithms could automatically resolve most disputes while judges merely select the applicable norm⁵⁰.

This proposal is radical and relies on a dubious analogy between Law and a code. Law is not just commands: some norms are ceremonial or declaratory, many are deliberately vague, and core ideas like ‘good faith’, ‘reasonableness’, or ‘public order’ cannot be reduced to simple *if-then* type statements⁵¹. Judges also do more than mechanically apply rules. They interpret, reconcile conflicting norms, fill gaps, and help develop the legal order, while drawing on equity and moral judgment in hard cases – which are dimensions that are difficult to capture in a code⁵².

If AI tools begin to shape judicial outcomes too strongly, adjudication risks drifting toward a managerial model focused on prediction and consistency rather than interpretation. Decisions may be seen as optimization outputs rather than reasoned responses to real disputes, thus weakening law as a human, deliberative enterprise and narrowing the space for moral and constitutional reflection.

4. Solutions and Regulatory Responses

AI’s challenges in judicial dispute resolution do not justify rejecting it altogether. AI can support efficiency, access to justice, and the management of growing caseloads, but only if deployed with appropriate caution and always in accordance with existing constitutional and procedural guarantees.

⁴⁸ KAZIM, Tatiana; TOMLINSON, Joe (2023). Automation Bias and the Principles of Judicial Review. *Judicial Review*. DOI: <https://doi.org/10.1080/10854681.2023.2189405>

⁴⁹ The National Archives (n.d.) *Magna Carta, 1215* [online]. <https://www.nationalarchives.gov.uk/education/resources/magna-carta/british-library-magna-carta-1215-runnymede/>

⁵⁰ KOVALEVA, N.N. (2019). Mashinochitaemoe Pravo Kak Mekhanizm Umnogo Regulirovaniia v Oblasti Sviazi. *Pravovaia politika i pravovaia zhizn'*, 3, 159.

⁵¹ OSTER, Jan (2021). Code is Code and Law is Law – the Law of Digitalization and the Digitalization of Law. *International Journal of Law & Information Technology*, 29(2), 114.

⁵² TAMOŠIŪNIENĖ, Egidija; TEREBEIZA, Žilvinas and DORŽINKEVIČ, Artur (2024). The Possibility of Applying Artificial Intelligence in the Delivery of Justice by Courts. *Baltic Journal of Law and Politics*, 17(1), 208.

This field must not be left in a regulatory grey zone or be governed solely by market forces. Instead, clear and enforceable rules are needed to frame how AI may be designed and used in judicial contexts.

At present, binding rules tailored specifically to AI in courts remain relatively rare. Most domestic procedural codes are technology-neutral and say little about AI-generated evidence, disclosure of AI use, or AI-assisted drafting. At the international and regional levels, however, several important instruments already provide a normative framework. The EU AI Act creates a general risk-based regime and classifies many AI systems used by courts and law-enforcement bodies as ‘high-risk’, subjecting them to strict requirements on data quality, robustness, transparency, human oversight, and post-market monitoring⁵³. The Council of Europe’s European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems (CEPEJ, 2018) sets out principles of respect for fundamental rights, non-discrimination, quality and security, transparency and impartiality, and user control⁵⁴. UNESCO’s Guidelines for the Use of AI Systems in Courts and Tribunals provide a global soft-law baseline, by insisting that AI should strengthen, rather than undermine, human-led justice and judicial independence⁵⁵. These instruments are still high-level, but they indicate both the need for regulation and the contours it should take.

The best option would be to combine the general AI framework (establishing universal principles) with sector-specific rules for courts and tribunals. Sectoral instruments in procedural and judicial law should specify how the general standards apply to evidence (including AI-generated or AI-processed material), disclosure duties regarding AI use by parties and courts, the drafting and reasoning of judgments, and avenues for appeal where AI has influenced the outcome. Such a layered model offers a promising way to balance innovation with the protection of core legal values.

Within court procedures, the idea of a ‘human in the loop’ means judges retain fundamental control over the use of AI tools in the courtroom, whether by the court itself, parties, lawyers, or experts. Human oversight here involves judicial officers understanding the general functioning and limits of the tools, critically examining AI-assisted outputs, and remaining free to accept, modify, or reject algorithmic suggestions. Decisions that draw on AI must be transparent enough to allow parties and reviewing courts to see how technology influenced the outcome, and to contest that influence where appropriate. In this sense, meaningful human control is closely linked to judicial independence and the right to a fair hearing.

At the same time, robust standards must also apply to developers and providers of AI systems. The increasingly important distinction between general-purpose AI models and domain-specific, legal tech tools should not remain merely doctrinal but should have concrete regulatory and practical consequences. General-purpose systems, such as public large language models, may be useful for ancillary tasks (for example, drafting informal correspondence, brainstorming, or simple translation), but they are not designed or certified for core legal functions and carry heightened risks of hallucination, misinterpretation, and confidentiality breaches. By contrast, tools marketed for use in or by courts (for legal research, risk assessment, or evidence analysis) should meet stricter *ex ante* requirements on explainability, data governance, non-discrimination, and security⁵⁶. Explainability and fairness must

⁵³ Regulation (EU) 2024/1689. (2024). *Artificial Intelligence Act*. Official Journal of the European Union, L 206, 1–104 (Art. 6).

⁵⁴ Council of Europe, European Commission for the Efficiency of Justice. (2018). *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment*. Strasbourg, France: Council of Europe.

⁵⁵ UNESCO. (2025). *Guidelines for the use of AI systems in courts and tribunals*. Paris, France: UNESCO. <https://doi.org/10.58338/LIEY8089>.

⁵⁶ MALGIERI, Gianclaudio and PASQUALE, Frank (2024). Licensing High-risk Artificial Intelligence: Toward *ex ante* Justification for a Disruptive Technology. *Computer Law & Security Review*, 52, 5.

be built into these systems by design, and not left to judicial scrutiny in individual cases. Certification schemes and periodic independent audits can help ensure that only systems meeting defined thresholds of reliability and compliance are used for high-stakes adjudicative purposes, while lower-risk, purely administrative tools may justifiably be subject to lighter control⁵⁷.

Some commentators have advocated “regulatory sandboxes” to test AI innovations in controlled environments⁵⁸. While this approach may work for alternative dispute resolution, where flexibility and innovation are higher, it may not be ideal for judicial dispute resolution. Court procedures are closely tied to constitutional guarantees of equality before the law and equal access to justice. Introducing experimental AI regimes only in certain regions, types of cases, or for specific groups of litigants risks fragmenting protections and creating unequal treatment between ‘experimental’ and ‘ordinary’ forums. While pilot projects can be valuable, they should not undermine the uniformity and openness that courts owe to all users.

Given the speed of technological change, binding regulation – even if well designed – will rarely be sufficient on its own. Soft-law instruments and professional self-regulation, therefore, play a crucial complementary role. At the international level, the CEPEJ Ethical Charter, UNESCO’s Guidelines, the EU’s Ethics Guidelines for Trustworthy AI and subsequent principles on “trustworthy and ethical AI”, and OECD recommendations on people-centered justice all articulate common values: human agency, fairness, transparency, accountability, non-discrimination, privacy, security, and respect for human dignity.

Professional communities have begun to translate these into concrete obligations. The Council of Bars and Law Societies of Europe (CCBE) has issued a Guide on the Use of Artificial Intelligence-based Tools by Lawyers⁵⁹ and, more recently, a Guide on the Use of Generative AI by Lawyers⁶⁰, emphasizing that lawyers remain personally responsible for AI-assisted work, must safeguard confidentiality and professional secrecy, and must verify AI-generated content before relying on it. Similar guidance is emerging from national bar associations and the American Bar Association, which has begun addressing AI in ethics opinions on competence, supervision, and confidentiality⁶¹. These instruments help to structure responsible use even where legislation is still catching up.

Finally, courts themselves must adopt internal operational protocols and invest in sustained capacity-building. Even without detailed statutory mandates, court systems can require source verification for AI-generated citations and factual statements, maintain logs or annotations documenting when AI tools have been used in drafting or analysis, restrict unsupervised generative drafting of judicial decisions, and clearly distinguish between low-risk administrative tools and high-risk applications that influence legal reasoning or outcomes. Judicial training programs, such as those developed under UNESCO’s AI and Rule of Law initiatives and similar national efforts, can equip judges and the court staff with a realistic understanding of AI’s capabilities and limits, helping them to use these tools in ways that

⁵⁷ LinkedIn (Feb 12, 2026). UNESCO’s Guidelines for the Use of AI in Courts and Tribunals [LinkedIn post]. https://www.linkedin.com/posts/unesco_unescos-guidelines-for-the-use-of-ai-in-activity-7416478701556727809-aUIr/

⁵⁸ ESPAÑOL, Guio and KOENIG, Pascal (2025). Regulatory Sandboxes for AI in The Majority World: A Learning-Centric Approach to Legal Adaptation. *Cambridge Forum on AI: Law and Governance*, 1, 1–3.

⁵⁹ Council of Bars and Law Societies of Europe. (2022). *Guide on the use of artificial intelligence-based tools by lawyers and law firms in the EU (AI4Lawyers)*. Brussels, Belgium: CCBE.

⁶⁰ Council of Bars and Law Societies of Europe. (2025). *CCBE guide on the use of generative AI by lawyers*. Brussels, Belgium: CCBE.

⁶¹ American Bar Association, Standing Committee on Ethics and Professional Responsibility. (2024). *Formal Opinion 512: Generative artificial intelligence tools*. Chicago, IL: American Bar Association.

support, rather than supplant, human judgment. Taken together, these legal, technical, institutional, and ethical measures do not eliminate the risks of AI in dispute resolution but can, instead, direct technological development toward a model of adjudication that remains fundamentally human-centered and consistent with the rule of law.

Conclusions

1. The analysis showed that ‘Artificial Intelligence’ in legal practice covers a range of technologies, from relatively simple tools (search, classification, document management) through predictive analytics to complex generative systems, and that different technical architectures (rule-based systems, machine-learning models, large language models) raise distinct opportunities and risks for courts and litigants.
2. Across courts and dispute-resolution, AI is already being used in at least three main ways: as procedural support (case-flow management, scheduling, document handling), as assistive decision-support (legal research, drafting, predictive outcome analysis), and, experimentally, in more autonomous roles (presenting suggestions to the judge and simple cases resolutions), with the article arguing that AI is best confined to supportive rather than decision-substituting functions.
3. The key challenges identified include technical opacity and ‘black box’ reasoning, hallucinations and inaccuracies, bias and discrimination risks, digital divide and unequal access, information and power asymmetries between technology providers and ordinary litigants, and threats to core procedural guarantees such as reason-giving, transparency, equality of arms, and judicial independence.
4. A purely technological or market-driven trajectory is inadequate: meaningful safeguards require a layered framework that combines horizontal, risk-based AI regulation with court-specific procedural and ethical rules. Within that framework, several priorities stand out: preserving human responsibility and meaningful oversight; demanding explainability and person-centered transparency where AI affects rights; actively preventing and correcting discriminatory outcomes; and differentiating legal technology tools from generic systems used at the court’s or lawyer’s own risk.

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