Vilnius University, Faculty of Law

Department of Private Law

Jesunifemi Joshua Aborisade

2nd study year, International and European Law Study Programme Student

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Involvement Of AI In Courts' Decision Making: Will It Trigger Due Process?

Dirbtinio Intelekto Itraukimas į Teismų Sprendimų Priėmimą: Ar Tai Paskatins Teisingą Procesą?

Supervisor: Assoc. Professor Albertas Šekštelo

Reviewer: Victor Terekhov

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ABSTRACT AND KEYWORDS

The subject of this dissertation is whether artificial intelligence can be introduced into judicial procedures without violating due process. The dissertation examines the international, European, and Lithuanian standards of law, as well as comparative practices regarding the impact of AI on the guarantees of fair hearing, transparency, equality of arms, and independence of judges. It determines that AI cannot be used to support adjudication without compromising the minimum guarantees and thus is limited strictly to non-adjudicative administrative functions.

Keywords: Judicial Decision-making, Artificial Intelligence, Due Process, Fairness, Transparency, Judicial Independence

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LIST OF ABBREVIATIONS

AI: Artificial Intelligence

BVerfG: Bundesverfassungsgericht (German Federal Constitutional Court)

BVerwG: Bundesverwaltungsgericht (German Federal Administrative Court)

CENDOJ: Centro de Documentación Judicial (Judicial Documentation Centre, Spain)

CEPEJ: European Commission for the Efficiency of Justice (of the Council of Europe)

CFR: Charter of Fundamental Rights of the European Union

CGPJ: Consejo General del Poder Judicial (General Council of the Judiciary, Spain)

CJEU: Court of Justice of the European Union

CNIL: Commission Nationale de l'Informatique et des Libertés (French Data Protection Authority)

COMPAS: Correctional Offender Management Profiling for Alternative Sanctions

Conseil d'État: Council of State (France)

CRT: Civil Resolution Tribunal (British Columbia, Canada)

ECHR: European Convention on Human Rights

e-Court: Electronic Court

ECtHR: European Court of Human Rights

e-File: Electronic File

e-Justice: Electronic Justice

EU: European Union

GDPR: General Data Protection Regulation

GPAIS: General Purpose Artificial Intelligence Systems

HITS: Hyperlink-Induced Topic Search (algorithm)

ICCPR: International Covenant on Civil and Political Rights

INTERPOL: International Criminal Police Organization

LIME: Local Interpretable Model-agnostic Explanations

NLP: Natural Language Processing

OECD: Organization for Economic Co-operation and Development

SHAP: Shapley Additive Explanations

STS: Sentencia del Tribunal Supremo (Supreme Court Judgment, Spain)

SyRI: System Risk Indication (Netherlands)

TEU: Treaty on European Union

U.S.: United States

UK: United Kingdom

UN: United Nations

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNICRI: United Nations Interregional Crime and Justice Research Institute

VICTOR: Name of the Brazilian Supreme Court's AI system (acronym meaning not explicitly defined in text)

XAI: Explainable Artificial Intelligence

INTRODUCTION

Artificial Intelligence (AI), being one of the most significant technological forces of the twenty-first century, is rapidly transforming domains such as health, commerce, education, and governance. Demand for AI in courts is mounting as judicial systems worldwide face surging caseloads, pressure for increased efficiency, and increasingly complex legal processes. International bodies such as the United Nations (UN) and the Organization for Economic Co-operation and Development (OECD) have recognized both the benefits and risks of AI in governance. The OECD's *Principles on Artificial Intelligence* provide that AI must be "innovative and trustworthy" and must respect human rights and democratic values.[1] Similarly, the UN Interregional Crime and Justice Research Institute (UNICRI), in partnership with INTERPOL, acknowledges that while AI could enhance access to justice and efficiency, its deployment must be carefully regulated to prevent the undermining of foundational rights.[2] UNESCO's *Recommendation on the Ethics of AI* emphasizes that transparency, accountability, and human oversight are essential and non-negotiable for protecting dignity and fairness in legal processes.[3] These international guidelines demonstrate the mounting belief that although AI does promise towards greater justice, its use needs judicious consideration against strong protection measures lest the rule of law be undermined.

Relevance of the study. The debate is fundamentally defined by the tension between efficiency and fairness in judicial proceedings. Proponents contend that judicial efficiency may be enhanced through automation of routine tasks, prediction of case outcomes, and provision of legal research support. For example, selected jurisdictions have experimented with AI-driven predictive analytics to accelerate decision-making and reduce case backlogs.[4] Opponents identify significant threats including algorithmic bias, lack of explainability, and potential compromise of judicial independence.[5] These concerns resonate strongly with international law, which places procedural fairness at its core. Article 14 of the International Covenant on Civil and Political Rights (ICCPR, 1966) guarantees the right to a fair hearing and equality before the courts. Similarly, Article 6 of the European Convention on Human

[1] **OECD.** (2019). *OECD Principles on Artificial Intelligence.* Paris: OECD Publishing.
[2] **UNICRI; INTERPOL.** (2021). *Artificial intelligence and the rule of law: A global perspective*
[3] **UNESCO.** (2021). *Recommendation on the Ethics of Artificial Intelligence.*
[4] OSWALD, Marion; GRACE, Jamie; URWIN, Samuel; BARNES, Geoffrey C. (2018). *Algorithmic risk assessment policing models: Lessons from the Durham HART model and "experimental" proportionality. Information & Communications Technology Law*, 27(2), pp. 223–250.
[5] NGIGE, Okechukwu C.; AWODELE, Olumide; BALOGUN, Olayinka (2021). *Judicial artificial intelligence bias: A survey and recommendations. Transactions on Machine Learning and Artificial Intelligence*, 9(2), pp. 74–86.

Rights (ECHR, 1950) and Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000) enshrine the rights to an effective remedy and a fair hearing before an impartial tribunal. This principle was reaffirmed in *Salduz v. Turkey*[6] (ECtHR, 2008), wherein the Court held that fairness under Article 6 requires access to procedural guarantees, while *Hirst v. United Kingdom (No. 2)* (ECtHR, 2005) emphasized proportionality and fairness in judicial limitations.[7] Judicial applications of AI require close scrutiny in light of these legal instruments that place fairness, independence, and transparency at the core of justice.

The European Union (EU) has assumed a leadership role in developing comprehensive AI regulation. The recently adopted *Artificial Intelligence Act* (Regulation (EU) 2024/1689) classifies AI systems used in judicial decision-making as "high-risk," mandating strict compliance with obligations including risk assessment, transparency, and human oversight. This legislation reflects recognition that while AI offers potential efficiency gains, its risks are too significant to remain unregulated. Complementing this framework is the Council of Europe's *European Ethical Charter on the Use of AI in Judicial Systems* (2018), which establishes sector-specific principles emphasizing non-discrimination, data quality, and user control in judicial applications. Jurisprudence from the Court of Justice of the European Union (CJEU) and the European Court of Human Rights (ECtHR) reinforces these principles, requiring that technological innovations remain compatible with fundamental due process guarantees. Together, these EU initiatives reflect a dual commitment: promoting digital transformation while ensuring that judicial independence and procedural fairness are not compromised.

Lithuania's experience is situated at the intersection of these international and European developments. In 2020, the Government of Lithuania published its *National AI Strategy*, which articulated ambitions for responsible AI development across multiple areas of state activity, including the judiciary.[8] Digitalization reforms such as the e-Justice system and enhanced electronic case management demonstrate efforts to modernize judicial proceedings.[9] However,

[6] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 27 November 2008 in case *Salduz v. Turkey*, Application No. 36391/02. ECLI: CE:ECHR:2008:1127JUD003639102.
[7] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 6 October 2005 in case *Hirst v. the United Kingdom (No. 2)*, Application No. 74025/01. ECLI: CE:ECHR:2005:1006JUD007402501.
[8] **GOVERNMENT OF LITHUANIA.** *Lithuanian Artificial Intelligence Strategy* (2020). Vilnius: Ministry of the Economy and Innovation.
[9] VĖBRAITĖ, Vaida; STRIKAITĖ-LATUŠINSKAJA, Gabija (2023). *Digitalization of justice in Lithuania: Impact of the COVID-19 pandemic on justice systems. Law and Information Society Review*, pp. 223–234..

compared with Estonia, which has pioneered AI systems in small-claims proceedings,[10] Lithuania has adopted a more cautious approach. While embracing technological modernization, Lithuania has refrained from immediately adopting or testing AI tools in judicial decision-making itself, reflecting concern for safeguarding judicial independence.[11] This cautious approach presents a valuable comparative opportunity: Lithuania exemplifies smaller EU Member States balancing digital innovation against traditional due process requirements.

Against this backdrop, this dissertation endeavors to answer a central research question: *Will the integration of AI into judicial decision-making enhance or erode due process?* This dissertation examines whether AI enhances or erodes due process when integrated into judicial decision-making. While some scholars contend that AI may reduce human bias and improve consistency,[12] others warn that AI introduces new, opaque forms of algorithmic bias.[13] This work advances the position that AI, in its current and foreseeable forms, cannot adequately enhance due process due to inherent limitations in interpretive reasoning, transparency, and human discretion. The study commences with doctrinal and comparative analysis of relevant legal frameworks and concludes with contextually appropriate recommendations for Lithuania and similar jurisdictions.

Research Problem. The introduction of AI into judicial systems raises a fundamental question: whether efficiency and consistency derived from technological assistance are compatible with the inviolable guarantees of due process. Proponents of AI use in courts contend that algorithmic systems may prevent human error, reduce delays, and promote uniformity in adjudication through data-driven insights.[14] From this perspective, AI may enhance procedural fairness by limiting arbitrary discretion.[15] Critics argue that algorithmic dependence may undermine fairness by embedding bias in datasets, compromise transparency through inaccessible black-box reasoning, and erode judicial independence through over-

[10] LIMANTĖ, Agnė; ŠUKYTĖ, Miglė (2025). *Comparative insights and future directions of AI in the courts of the Baltic States. International Journal of Law and Information Technology*, 33, p. eaaf002.
[11] CONTINI, Francesco; ONTANU, Elena Alina; VELICOGNA, Marco (2024). *AI accountability in judicial proceedings: An actor–network approach. Laws*, 13(6), p. 71.
[12] ASHLEY, Kevin D. (2017). *Artificial intelligence and legal analytics: New tools for law practice in the digital age.* Cambridge: Cambridge University Press.
[13] WISCHMEYER, Thomas; RADEMACHER, Timo (eds.) (2020). *Regulating artificial intelligence.* Cham: Springer.
[14] OSWALD, M.; GRACE, J.; URWIN, S.; BARNES, G. C. (2018) (n 4)
[15] MIZARAS, Vytautas; DWIVEDI, Yogesh K.; EARP, Brian D.; FENWICK, Mark; JURCYS, Paulius; KOZUKA, Souichirou; PORSDAM MANN, Sebastian (2025). *Artificial intelligence, the right to a fair trial and the courts.* Forthcoming in: *Cambridge Handbook of AI and Technologies in Courts*. Cambridge: Cambridge University Press.

reliance on machine-generated outputs.[16] This dichotomy demonstrates that AI is not value-neutral; its impact on judicial decision-making is significantly shaped by the legal and institutional safeguards governing its deployment.[17]

At the international level, due process constitutes one of the most fundamental legal concepts, enshrined in Article 14 of the International Covenant on Civil and Political Rights (ICCPR, 1966)[18] and reflected in regional instruments including Article 6 of the European Convention on Human Rights (ECHR, 1950)[19] and Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000). [20] These are not merely procedural requirements but constitutional principles fundamental to the rule of law, including the rights to an impartial hearing, the opportunity to be heard, and the requirement that courts provide reasoned judgments.[21] This requirement was clearly *articulated in Kraska v. Switzerland*[22], wherein the Court held that failure to provide reasoned decisions violates the right to a fair trial, and in *Dudgeon v. United Kingdom*,[23] which emphasized the necessity of balancing individual rights against broader public interests. The concern is that AI technologies, if inadequately designed or insufficiently monitored, may subvert these principles by undermining judicial discretion or obscuring the reasoning process essential to a fair hearing.

From the European Union perspective, the Artificial Intelligence Act (Regulation (EU) 2024/1689) specifically classifies AI systems used in judicial proceedings as "high-risk."[24] This classification reflects recognition that misuse of AI could violate fundamental rights, particularly due process guarantees. Similarly, the Council of Europe's *European Ethical Charter on the Use of AI in Judicial Systems* (2018) acknowledges AI's dual potential: while

[16] CHAUDHARY, G. (2024). Unveiling the black box: Bringing algorithmic transparency to AI. Masaryk University Journal of Law and Technology, 18(1), 93-122.
[17] CONTINI, Francesco; ONTANU, Elena Alina; VELICOGNA, Marco (2024) (n 11)
[18] **UNITED NATIONS.** *International Covenant on Civil and Political Rights*, adopted on 16 December 1966, entered into force on 23 March 1976, Article 14. *United Nations Treaty Series*, Vol. 999, p. 171.
[19] **COUNCIL OF EUROPE.** *Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights)*, signed on 4 November 1950, entered into force on 3 September 1953, Article 6. *European Treaty Series*, No. 5.
[20] **EUROPEAN UNION.** *Charter of Fundamental Rights of the European Union*, consolidated version 2012, Article 47. *Official Journal of the European Union*, C 326, 26 October 2012, pp. 391–407.
[21] HARRIS, David J.; O'BOYLE, Michael; BATES, Ed; BUCKLEY, Carla (2023). *Law of the European Convention on Human Rights.* Oxford: Oxford University Press.
[22] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 19 April 1993 in case *Kraska v. Switzerland*, Application No. 13942/88. ECLI: CE:ECHR:1993:0419JUD001394288
[23] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 22 October 1981 in case *Dudgeon v. United Kingdom*, Application No. 7525/76. ECLI: CE:ECHR:1981:1022JUD000752576.
[24] **EUROPEAN UNION.** Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act). *Official Journal of the European Union*, L 1689, 12 July 2024, pp. 1–159.

it may enhance decision-making processes, it equally poses risks to fairness and transparency if not carefully monitored. However, despite these frameworks, scholarly debate and regulatory discourse remain relatively underdeveloped in the Lithuanian context.

This situation reveals a specific research gap. While substantial scholarly attention has been devoted to AI implications in judicial proceedings within larger or more technologically advanced jurisdictions such as the United States, China, or France, limited academic consideration has been given to how AI would interact with Lithuania's due process guarantees. Lithuania's cautious approach to AI adoption differs from experiments by its Baltic neighbor Estonia, which has chosen to automate small-claims proceedings, yet has not received equivalent scholarly attention.[25] This gap raises unanswered questions: How might Lithuania's constitutional framework, which enshrines fair trial guarantees in Article 31 of the Constitution of the Republic of Lithuania (1992), interact with potential AI deployment in courts?[26] Would AI adoption compromise principles such as impartiality, independence, and transparency?

The central research question may thus be formulated as follows: will the introduction of AI into decision-making processes in Lithuanian courts and the broader EU context reinforce due process principles, or will it compromise them through opacity, bias, or over-reliance on data-processing technologies? Addressing this challenge requires not merely analysis of theoretical debates surrounding AI and fairness but also examination of the question within Lithuania's distinctive institutional and legal context.

Aim of the Research. This dissertation seeks to demonstrate the limitations of integrating artificial intelligence into judicial decision-making with respect to upholding due process and to critically examine the consequences thereof. This entails analyzing the risks that AI technologies pose to fundamental procedural protections including judicial independence, impartiality, transparency, and the right to a reasoned decision, alongside the potential efficiency improvements these technologies promise. The European Court of Human Rights emphasized the requirement of impartiality in *Piersack v. Belgium* (1982), highlighting the universal applicability of such protections across all legal contexts.[27]

This research specifically aims to establish that AI systems, when employed by judges in their decision-making processes, cannot operate within the constitutional and international

[25] VĖBRAITĖ, Vaida; STRIKAITĖ-LATUŠINSKAJA, Gabija (2023). (n 9)
[26] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania* (1992), Article 31.
[27] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 1 October 1982 in case *Piersack v. Belgium*, Application No. 8692/79. Series A, No. 53. ECLI: CE:ECHR:1982:1001JUD000869279..

frameworks that uphold due process. These instruments—Article 14 of the *International Covenant on Civil and Political Rights* (ICCPR, 1966),[28] Article 6 of the *European Convention on Human Rights* (ECHR, 1950),[29] Article 47 of the *Charter of Fundamental Rights of the European Union* (CFR, 2000),[30] and Article 31 of the *Constitution of the Republic of Lithuania* (1992)[31]—serve as the normative benchmarks against which AI integration into the judiciary must be assessed.

This study intends to contribute to broader international discussions on the future of AI in upholding due process while offering a specific national perspective by focusing on Lithuania within its European and international legal framework.

To achieve the stated research aim and provide systematic examination of the relationship between artificial intelligence and due process in judicial decision-making, the following specific objectives have been formulated:

First: To explore the conceptual framework of due process and judicial decision-making. This entails examination of the most critical provisions, namely Article 31 of the Constitution of the Republic of Lithuania (1992), Article 6 of the European Convention on Human Rights (ECHR, 1950), and Article 14 of the International Covenant on Civil and Political Rights (ICCPR, 1966). Additionally, due process guarantees are contextualized at the EU level through Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000). This objective provides the conceptual framework for assessing whether AI systems align with or depart from these guarantees.

2: Second: To examine AI applications in courts internationally, in Europe, and in Lithuania.

This objective seeks to map and analyze the various types of AI systems currently utilized or under consideration for deployment in judicial systems. Examples from other jurisdictions include Estonia's small-claims adjudication projects, AI-based predictive sentencing tools in the United States, and risk assessment algorithms in criminal justice systems. Although the Wisconsin Supreme Court upheld the COMPAS algorithm's use with cautionary instructions in *State v. Loomis* (2016), the use of the program for sentencing generated significant due

[28] **UNITED NATIONS.** *International Covenant on Civil and Political Rights*, 1966. (n 18)
[29] **COUNCIL OF EUROPE.** *European Convention on Human Rights*, Article 6. (n 19)
[30] **EUROPEAN UNION.** *Charter of Fundamental Rights of the European Union*, Article 47. (n 20)
[31] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*, Article 31. (26)

process concerns around explainability and transparency.[32] The Artificial Intelligence Act (Regulation (EU) 2024/1689) offers a legislative framework for categorizing certain applications as "high-risk" at the European level.

Lithuania, in their turn, have moved at a slower pace, as they have embraced digitization (e-Justice reforms) without yet incorporating AI in judicial decision-making. The study places Lithuania into larger comparative discussions by looking at these circumstances.

Third: To analyze the interaction between AI technologies and due process principles. A central analytical objective is to evaluate how AI systems may distort due process. For example, while AI may enhance consistency and reduce delays, it may simultaneously introduce opacity and algorithmic bias. This objective focuses specifically on due process components including judicial independence, impartiality, equality of arms, and the right to a reasoned decision. It examines whether reliance on AI risks undermining the human element of adjudication required by international and constitutional law. This risk is reflected in *Liberty v. United Kingdom (ECtHR, 2008),* wherein the Court condemned opaque state processes and emphasized the necessity of safeguards against hidden or unchallengeable mechanisms.[33]

4: Fourth: To evaluate Lithuania's legal and institutional readiness for AI in judicial decision-making and to propose policy and legal safeguards ensuring preservation of due process.

This objective focuses on Lithuania's national legal system, institutional capacity, and adopted di*g*italization policies. While the Lithuanian *AI Strategy* (2020) prioritizes responsible AI[34] adoption, the Lithuanian judiciary has not yet adopted AI in decision-making. This objective assesses whether existing constitutional safeguards, judicial culture, and available institutional resources are adequate to address the risks associated with AI adoption in adjudication. Comparative lessons from other EU Member States—including Estonia's pilot programs and France's restrictions on judicial data use under French Law No. 2019-222—will provide further insight into Lithuania's preparedness for AI adoption in judicial decision-making.[35] This research does not advocate for AI adoption in Lithuanian courts but acknowledges that AI

[32] **SUPREME COURT OF WISCONSIN.** Judgment of 13 July 2016 in case *State v. Loomis*, 2016 WI 68, 881 N.W.2d 749.
[33] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 1 July 2008 in case *Liberty v. United Kingdom*, Application No. 58243/00. *Reports of Judgments and Decisions* 2008-III. ECLI: CE:ECHR:2008:0701JUD005824300.
[34] **GOVERNMENT OF LITHUANIA.** *Lithuanian Artificial Intelligence Strategy,* 2020. (n 8)
[35] **FRENCH REPUBLIC.** *Law No. 2019-222 of 23 March 2019 on Programming 2018–2022 and Reform of the Justice System. Journal Officiel de la République Française*, 24 March 2019.

technologies are increasingly discussed at European and global levels. Accordingly, this objective recommends measures **to limit, regulate, or condition AI use**, ensuring that if AI is eventually adopted in Lithuanian adjudication, it does not compromise fairness, judicial independence, or transparency. Such measures include statutory provisions specifically limiting AI use in adjudication, stringent algorithmic explainability standards, and strengthened protections preserving human judicial authority. By emphasizing the priority of due process preservation over efficiency-driven justifications for technology adoption, the study contributes to scholarly knowledge and policy discourse.

The object of this research is the legal relationship arising from the integration of artificial intelligence into judicial decision-making processes in Lithuania, analyzed in light of constitutional, international, and European due process guarantees.

Research Methodology. The methodology employed in this dissertation reflects the need for rigorous, law-based, and comparative examination of the potential impact of Artificial Intelligence (AI) on due process in judicial decision-making. The research employs an integrated approach combining doctrinal, comparative, analytical, descriptive, and linguistic (interpretive) methods. The use of multiple methods ensures that the research is both theoretically robust and practically relevant to Lithuanian and broader European legal contexts.

The **doctrinal** method provides the foundational analytical framework for this work. It involves systematic examination of legal sources including treaties, constitutional provisions, statutes, and case law to identify the normative content of fair trial guarantees and due process rights. Article 14 of the International Covenant on Civil and Political Rights (ICCPR, 1966), Article 6 of the European Convention on Human Rights (ECHR, 1950), Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000), and Article 31 of the Constitution of the Republic of Lithuania (1992) are essential instruments. Additionally, the study draws upon jurisprudence from the European Court of Human Rights (ECtHR) and the Court of Justice of the European Union (CJEU), which provide authoritative interpretations of procedural fairness. The doctrinal method is particularly suited to ascertaining how existing legal standards apply to the introduction of AI into judicial operations.

The **comparative method** follows. Given the limited AI deployment in courts, the comparative approach enables the study to draw lessons from other jurisdictions. Particular emphasis is placed on Estonia, which has piloted AI use in small-claims adjudication, France, which has restricted judicial data use pursuant to Law No. 2019-222, and other EU Member States.

Beyond Europe, the study references the United States and China, which have pioneered AI technologies in criminal and administrative law.[36],[37] This comparative exercise enriches the analysis by situating Lithuania's cautious approach within a broader international context. This reflects the cautious approach endorsed by the ECtHR in *Handyside v. United Kingdom* (1976), wherein the Court applied the margin of appreciation doctrine, recognizing that states retain discretion in implementing fundamental rights when confronting novel challenges.[38]

The analytical method follows the comparative approach. The analytical method is employed to critically assess the impact of AI technologies on due process. It examines whether AI technologies such as predictive analytics, natural language processing of legal materials, or risk assessment algorithms compromise principles of fairness, impartiality, transparency, and judicial independence. The analysis is particularly attentive to issues including algorithmic opacity, training data bias, and displacement of the human element in judicial reasoning. This approach ensures that the study not only describes AI technologies but evaluates them against the legal values underlying due process.

The descriptive method is employed to map the current landscape of AI use in justice systems at international, EU, and Lithuanian levels. It identifies existing technologies, regulatory instruments, and institutional practices, thereby establishing an empirical baseline for deeper analysis. Examples include Lithuania's Artificial Intelligence Strategy (Government of Lithuania, 2020), the EU Artificial Intelligence Act (Regulation (EU) 2024/1689), and international frameworks such as the OECD Principles on AI.[39]

The **linguistic or interpretive** method is employed to ensure that legal materials are read carefully and contextually. This method is particularly useful when interpreting constitutional provisions or human rights treaties, ensuring that terms such as "fair trial," "independence," or "impartiality" are understood both literally and in light of jurisprudence. It complements the doctrinal method by avoiding overly literal readings while remaining attentive to evolving interpretations.

[36] VO, Anthony; PLACHKINOVA, Miloslava (2023). *Investigating the role of artificial intelligence in the US criminal justice system. Journal of Information, Communication and Ethics in Society*, 21(4), pp. 550–567.
[37] ZHIYUAN, Guo; JIAJIA, Yang (2025). *The application of artificial intelligence in China's criminal justice system. Legal Issues in the Digital Age*, 1, pp. 83–104.
[38] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 7 December 1976 in case *Handyside v. United Kingdom*, Application No. 5493/72. ECLI: CE:ECHR:1976:1207JUD000549372.
[39] **OECD.** *OECD Principles on Artificial Intelligence*, 2019. (n 1)

By combining these methods, the dissertation achieves an integrated, contextualized, and balanced analysis. The linguistic and doctrinal methods elucidate legal principles; the comparative and descriptive methods situate Lithuania within international discourse; and the analytical method critically evaluates AI's compatibility with due process. Collectively, this methodological framework serves the overarching objective of determining whether AI in judicial decision-making enhances or violates due process, specifically in the Lithuanian context.

Originality and Contribution to Knowledge. The originality of this research lies in its focus on the intersection of artificial intelligence (AI) and due process in the Lithuanian judiciary, examined against international and European law. While AI and law has become an increasingly prominent scholarly subfield, most earlier studies have concentrated on common law jurisdictions, large-scale comparisons, or leading digital nations.[40] Regarding Lithuania specifically, few scholarly works have examined its judicial context despite its active participation in EU digitalization initiatives and its cautious yet progressive national AI policy (Government of Lithuania, 2020).[41] Filling this gap, the dissertation provides an original scholarly contribution synthesizing doctrinal, comparative, and policy insights to contextualize Lithuania within broader international debates.

Another dimension of originality is the integration of global, EU, and national perspectives. While previous scholarship often confines itself to a single analytical level, this study adopts a multi-tiered approach: from international legal instruments (ICCPR, 1966) through European Union law and policy (ECHR, 1950; CFR, 2000; AI Act 2024) to Lithuania's national constitutional and judicial framework (Constitution of the Republic of Lithuania, 1992, Art. 31). This multi-level analysis ensures that the study is both theoretically rigorous and concretely grounded in the specific jurisdiction under examination.

The research also contributes to policy and practice. While related with comparative experiences, the dissertation itself nuances its recommendations for Lithuania's institutional realities such as its court structure, its information-technology readiness, and constitutional protection. In this manner, the findings become directly applicable to Lithuanian policymakers, judges, and legal practitioners. Meanwhile, the Lithuanian case study offers transferable lessons for other EU Member States with similar profiles—medium-sized jurisdictions subject

[40] LIMANTĖ, Agnė; ŠUKYTĖ, Miglė (2025). (n 10)
[41] **GOVERNMENT OF LITHUANIA.** *Lithuanian Artificial Intelligence Strategy*, 2020. (n 8)

to EU law but possessing distinct judicial cultures. Ultimately, the dissertation's uniqueness lies in its focus on the process of adjudication rather than solely on outcomes. Much current research on AI in law focuses on the accuracy or efficiency of algorithmic technologies.[42] This work differs by emphasizing how AI may reshape the very process of judicial reasoning itself—a process that constitutes the core of due process guarantees. This focus aligns with the Court's judgment in *Sunday Times v. United Kingdom* (ECtHR, 1979), wherein clarity regarding judicial processes was deemed essential to the rule of law.[43] This conceptual shift draws attention not only to decisions made with AI assistance but also to how they are made and whether that process fulfills normative requirements of transparency, independence, and fairness.

In summary, the originality of this research lies in its specific focus on Lithuania, its multi-level analysis, and its emphasis on process. It contributes to the literature by filling an existing gap in Lithuanian legal scholarship while offering evidence-based, policy-relevant guidance for responsible AI use in courts.

Most Important Sources. The study relies on various types of sources, all of which play a crucial role in assessing whether artificial intelligence can be incorporated into judicial decision-making without compromising due process protections. The international human rights framework—Article 14 of the International Covenant on Civil and Political Rights, Article 6 of the European Convention on Human Rights, and Article 47 of the Charter of Fundamental Rights of the European Union—establishes fairness, transparency, and equality before the judiciary as essential guarantees of fair adjudication. These instruments are indispensable as the dissertation examines how algorithmic decision-making interacts with longstanding procedural rights.

European Union legislation—particularly the Artificial Intelligence Act (Regulation (EU) 2024/1689)—constitutes another fundamental source as it directly classifies judicial AI systems as "high-risk" and mandates transparency, accountability, risk assessment, and human oversight throughout all deployment phases. This regulation provides the binding legal framework within which EU Member States, including Lithuania, must operate when integrating AI into judicial systems.

[42] CHEN, Qiang (2025). *Improving the trial efficiency of criminal cases with the assistance of artificial intelligence. Discover Artificial Intelligence*, 5(1), p. 110.
[43] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 26 April 1979 in case *Sunday Times v. United Kingdom*, Application No. 6538/74. Series A, No. 30. ECLI: CE:ECHR:1979:0426JUD000653874.

These binding instruments are complemented by soft-law sources. The OECD Principles on AI, UNICRI–INTERPOL reports on AI in justice, UNESCO's Recommendation on the Ethics of AI, and the Council of Europe's European Ethical Charter on the Use of AI in Judicial Systems (2018) all provide significant normative guidance by articulating principles of non-discrimination, human oversight, transparency, and accountability in algorithmic systems. These soft-law sources are important for developing conceptual understanding of trustworthy and rights-respecting AI beyond the minimum obligations imposed by binding law.

Case law provides the foundational basis for grounding the research in judicial practice. Rulings from the European Court of Human Rights and the Court of Justice of the European Union—including *Big Brother Watch v. United Kingdom*, *Schrems II, Salduz v. Turkey*, and *Hirst v. United Kingdom*—played a crucial role in defining criteria of proportionality, foreseeability, effective remedy, and judicial independence in scenarios involving technology-driven state interventions. These judgments provide doctrinal standards for assessing whether algorithmic systems can satisfy due process requirements. National jurisprudence from France, Germany, India, and the United States—including La Quadrature du Net, the German Federal Administrative Court's visa risk assessment ruling, *Anuradha Bhasin v. Union of India*, and *State v. Truitt*—is included to illustrate how different judicial systems respond when automated tools affect procedural rights or individual liberties.

Finally, academic literature provides an essential analytical foundation. Contributions from scholars including Hildebrandt, Hendrickx, Calo, Grimm, and Bordt provide theoretical foundations on algorithmic legitimacy, explainability, responsibility gaps, and the constitutional implications of computational reasoning in law. This enables the dissertation to situate legal analysis within broader debates on technological governance, fairness, and preservation of human judicial reasoning. These legal instruments, case law, soft-law sources, and scholarly works collectively provide the necessary foundation for conducting an in-depth assessment of whether AI-enabled adjudication can remain compatible with due process principles.

Scope and Limitations. This dissertation is intentionally focused on a narrow scope to enable intensive and consistent analytical treatment. It focuses on judicial decision-making rather than the broader range of AI applications in governance, public administration, or law enforcement. Although AI is increasingly used in law enforcement, administrative decision-making, and private dispute resolution, this study limits itself to the courtroom environment,

particularly examining AI's potential to impede or disrupt the process by which judges render final decisions. This narrow focus is essential because due process—defined as the guarantee of a fair hearing, judicial independence, impartiality, and reasoned decision-making—is most critical in the adjudicatory context. In this regard, the courtroom presents the most rigorous test of whether AI technologies can be compatible with constitutional and human rights protections.

The geographical focus is Lithuania, given this dissertation's relevance to the Faculty of Law and the national legal context. Lithuania has adopted an ambitious Artificial Intelligence Strategy (Government of Lithuania, 2020) and initiated judicial digitalization through e-Justice reforms.[44] Although Lithuania has not yet directly employed AI in judicial reasoning, this makes it a particularly valuable subject for analysis. By examining Lithuania, this work provides insights not only for national decision-makers but also for other medium-sized EU Member States balancing innovation against constitutional protections.

Simultaneously, the research situates Lithuania within the broader European and international context. Procedural fairness is protected by Article 14 of the International Covenant on Civil and Political Rights (ICCPR, 1966), Article 6 of the European Convention on Human Rights (ECHR, 1950), and Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000). EU law, particularly the Artificial Intelligence Act (Regulation (EU) 2024/1689), provides a key framework for regulating high-risk AI systems in judicial contexts. International comparisons—including Estonian pilot AI programs in courts, French restrictions on judicial data use, and developments in the United States and China—are integrated to provide analytical depth and extract lessons applicable to Lithuania.

Certain **limitations** are acknowledged. First, the study is qualitative and doctrinal; it does not include empirical AI software testing or quantitative measurement of algorithmic outcomes. This is a deliberate limitation, as the study examines AI’s legal and normative compatibility with due process rather than its technical effectiveness. Second, the study is constrained by the availability of written sources and policy documents. Because Lithuania has not yet implemented AI in courts, the analysis relies primarily on comparative law from other jurisdictions and theoretical extrapolation. Third, an inherent limitation arises from the rapidly evolving landscape of AI technologies and laws: while the dissertation incorporates the latest available sources, developments such as full implementation of the AI Act or deployment of new AI technologies in courts may alter the landscape. Fourth, the comparative analysis is

[44] VĖBRAITĖ, Vaida; STRIKAITĖ-LATUŠINSKAJA, Gabija (2023). (n 9)

necessarily selective given the breadth of potential subjects. It examines only those jurisdictions most relevant to Lithuania’s context (other EU Member States and representative examples from other regions).

Despite these limitations, the chosen scope ensures that the dissertation is focused yet substantive. By focusing on judicial decision-making while situating it within European and international contexts, the study provides a balanced and original contribution. The limitations do not diminish the study's value but rather align with its conceptual focus: a normative, doctrinal, and comparative exploration of AI's implications for due process.

CHAPTER ONE

1.0 CONCEPTUAL AND DOCTRINAL FOUNDATIONS OF ARTIFICIAL INTELLIGENCE, JUDICIAL DECISION-MAKING AND DUE PROCESS

1.1 Introduction

The introduction of Artificial Intelligence (AI) has shifted the e-Discovery mindset toward predictive analytics, compelling jurists to rethink the meaning of human reasoning as it applies to adjudication. With exponential case growth in court systems worldwide, governments are considering the use of algorithmic tools to manage dockets, provide sentencing suggestions, and find precedents. However, experiment dilemma: is it possible to involve a machine in the judgment without compromising due process?

Legal theorist Mireille Hildebrandt calls this tension "the constitutional moment of computation," arguing that algorithmic reasoning challenges the human interpretive core of law.[45] Similarly, Hendrickx warns that opaque AI systems threaten the epistemic legitimacy of judicial authority.[46]

Thus, this chapter constitutes the conceptual and doctrinal premises of the assessment of whether AI can be compatible with due process. It initially delineates and categorizes AI in legal systems, discusses what constitutes judicial decision-making, and lastly addresses the historical and doctrinal roots of due process. The reasoning is based on a very simple premise: the efficiency of technologies will not be able to substitute the law legitimacy. Incorporation of AI in courts should not affect the fairness, transparency, and judicial independence that are the three pillars of the doctrine of due process.

1.2 Definition and Scope of Artificial Intelligence

1.2.1 Legal and Academic Definitions (2015 – 2025)

OECD Principles on AI (2019) refers to AI as a machine-based framework that is capable of making predictions, recommendations or decisions concerning real or virtual environments

[45] HILDEBRANDT, Mireille (2020). *Law for computer scientists and other folk.* Oxford: Oxford University Press.
[46] HENDRICKX, Victoria (2025). *Rethinking the judicial duty to state reasons in the age of automation?* In: *Cambridge Forum on AI: Law and Governance*, Vol. 1, p. e26. Cambridge: Cambridge University Press.

based on a specified set of objectives.[47] This has been extended to systems by the EU Artificial Intelligence Act (Regulation (EU) 2024/1689) that are capable of producing outputs in the form of content, predictions, recommendations or decisions by varying degrees of autonomy.

In academic literature, Russell and Norvig describe AI as "the study of agents that receive percepts from the environment and perform actions that maximize expected success". Legal scholars, in turn, emphasize accountability and explainability.[48] Hildebrandt states that AI should be understood as a normative infrastructure since the choice of designs incorporates values that influence rights.[49] The Recommendation on the Ethics of AI by UNESCO in 2021 introduces a rights-based dimension, which presupposes that every AI system must be human-centered, transparent, and accountable.[50]

Therefore, analysis of AI use in the legal field during 2015-2025 reveals that AI has ceased to be merely a calculation tool and has become a juridical agent whose decisions may determine rights, obligations, and access to justice. The convergence of definitions highlights the fact that the legality of AI is not only related to its performance but also to its adherence to the constitutional provisions of fairness and transparency.

1.2.2 Categories of Artificial Intelligence: Weak and Strong AI

Scientists differentiate the weak AI (task focused systems) and strong AI (generalized cognition). The current legal-tech applications are driven by weak AI: predictive coding, document clustering, and sentencing dashboards.[51] [52] The inherently moral reasoning of strong AI, which remains hypothetical but constitutes an active topic of debate, raises questions of responsibility and personhood (Huq, 2024).[53]

Although the vast majority of judicial systems apply only weak AI to research and scheduling, even in such cases, procedural guarantees must be honored. An example of a case where an algorithmic child-support calculator was challenged on the grounds of the unfairness of the

[47] **OECD.** *OECD Principles on Artificial Intelligence*, 2019. (n 1).
[48] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24)
[49] HILDEBRANDT, Mireille (2020). (n 45)
[50] **Ibid**
[51] TRIGUERO, Isaac; MOLINA, Daniel; POYATOS, Javier; DEL SER, Javier; HERRERA, Francisco (2024). *General purpose artificial intelligence systems (GPAIS): Properties, definition, taxonomy, societal implications and responsible governance. Information Fusion*, 103, 102135.
[52] RAMAN, Raghavan; KOWALSKI, Robert; ACHUTHAN, Krishnadas; IYER, Ananth; NEDUNGADI, Prema (2025). *Navigating artificial general intelligence development: Societal, technological, ethical, and brain-inspired pathways. Scientific Reports*, 15(1), pp. 1–22.
[53] HUQ, Aziz Z. (2024). *Artificial intelligence and the rule of law.* In: *Routledge Handbook of the Rule of Law*, pp. 260–272. London: Routledge.

result of a formulaic bias is *State of Kansas v Truitt*.[54] Similarly, the Supreme Court of India in *Anuradha Bhasin v Union of India*[55] has ruled that technological limitations to rights have to pass necessity and proportionality tests. These cases uphold a principle to AI in adjudication: automation should not be used as to subject a person to disproportionate effect or to forego individualized decision-making.

1.2.3 International and Regional Regulatory Frameworks

The process of regulation occurs at the international level through soft-law consensus. The OECD Principles advance trustful and human-oriented AI.[56] The UNICRI and INTERPOL Report on AI in Justice Law Enforcement (2020) emphasizes that the use of AI in justice, i.e. algorithmic profiling, should be controlled by human beings (UNICRI Report 2020). UNESCO calls to pre-deployment human-rights impact assessment.[57]

On the regional level, Europe has the lead in the binding regulation. The European Ethical Charter on AI in Judicial Systems proposed by the Council of Europe proposes five principles including the respect of fundamental rights, non-discrimination, data quality, transparency and user control as the principles to be respected in any case.[58] The central question is whether the introduction of AI into the decision-making process will preserve or violate these principles. The EU AI Act (2024/1689) even further categorizes judicial AI as a high-risk tool and requires compliance evaluation, documentation, and ongoing human supervision.[59]

These safeguards are represented by case law. The Court rejected the EU-US Privacy Shield in Schrems II (*Data Protection Commissioner v Facebook Ireland Ltd*) due to a deficiency in protection of automated transfers of data (CJEU Judgment).[60] This rationale—encompassing adequacy, proportionality, and redress mechanisms—resembles that which should be applicable to AI within judicial systems: algorithmic outputs with implications for rights must be subject to independent review and amendment.

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[54] **Ibid**
[55] **SUPREME COURT OF INDIA.** Judgment of 10 January 2020 in case *Anuradha Bhasin v. Union of India*, (2020) SCC Online SC 14.
[56] OECD. (2025). (n 45)
[57] **UNESCO.** *Recommendation on the Ethics of Artificial Intelligence*, 2021. (n 3)
[58] **COUNCIL OF EUROPE.** *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment* (adopted 3–4 December 2018; published February 2019). Strasbourg: CEPEJ.
[59] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24)
[60] **COURT OF JUSTICE OF THE EUROPEAN UNION.** Judgment of 16 July 2020 in case *Data Protection Commissioner v. Facebook Ireland Ltd and Maximillian Schrems* (Schrems II), Case C-311/18. ECLI: EU:C:2020:559.

Likewise, the European Court of Human Rights, in *Big Brother Watch v United Kingdom*[61] determined that bulk-data interception did not have adequate measures of precision and effectiveness as required by Articles 8 and 10 ECHR. As the case demonstrates, unregulated technological governance that fails to observe proportionality provides interpretive precedent applicable to AI-enabled adjudication.

1.2.4 Contemporary Academic Debates Over the Last Decade

Academic discussion evolved from enthusiasm to caution between 2015 and 2025. Optimists emphasize efficiency and gains of access-to-justice. Grimm et al. (2024) claims that AI is able to scale judicial capacity by identifying patterns replacing human interpretation. Empirical results by Papadouli and Papakonstantinou have identified that machine-learning triage in Canadian tribunals cut backlog by a the quality of appeal.[62]

Sceptics, on the other hand, warn of black-box justice. Calo cautioned that leaving responsibility to algorithms leads to the emergence of responsibility gaps,[63] and Bordt et al., showed that failures in explainability undermine legitimacy [64] This has been termed by recent European thought as the algorithmic legitimacy problem, or the fear that citizens can no longer trace the results of judicial decisions to the human judgments that are accountable to them.[65]

Such concerns were upheld by the European Court of Human Rights in *Beghal v United Kingdom*,[66] where it emphasized that discretion that is not constrained by a clear legal framework does not comply with foreseeability in Article 8 ECHR. In practical terms, judicial AI needs to have a set of clear and reviewable restrictions. Therefore, contemporary scholarship holds that although AI may increase procedural efficiency, its legitimacy depends upon transparency, human control, and accountability—the three pillars of due process.

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[61] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 25 May 2021 in case *Big Brother Watch and Others v. United Kingdom*, Applications Nos. 58170/13, 62322/14 and 24960/15. ECLI: CE:ECHR:2021:0525JUD005817013.

[62] PAPADOULI, Vasiliki; PAPAKONSTANTINOU, Vasileios (2023). *A preliminary study on artificial intelligence oracles and smart contracts: A legal approach to the interaction of two novel technological breakthroughs. Computer Law & Security Review*, 51, 105869.

[63] CALO, Ryan (2017). *Artificial intelligence policy: A primer and roadmap. University of California Davis Law Review*, 51, pp. 399–435..

[64] GRIMMELIKHUIJSEN, Stephan; MEIJER, Albert (2022). *Legitimacy of algorithmic decision-making: Six threats and the need for a calibrated institutional response. Perspectives on Public Management and Governance*, 5(3), pp. 232–242.

[65] **Ibid**

[66] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 5 October 2021 in case *Beghal v. United Kingdom*, Application No. 4755/16. ECLI: CE:ECHR:2021:1005JUD000475516.

1.3 Judicial Decision-Making: Nature and Functions

Defining the essence of judicial decision-making is necessary before determining whether artificial intelligence is compatible with due process. The trial process is not computational accuracy but an act of interpretative reasoning which balances law, fact, and conscience. It is discretionary, empathetic, and morally attributes of justice and are uncharacteristic of algorithmic systems. Therefore, this conceptual, theoretical and functional aspects of adjudication to prove how the human aspects of reasoning, independence and disclosure are essential, and how their replacement by AI will undermine the very guarantees that due process.

1.3.1 Nature and Importance of Judicial Reasoning

The intellectual and moral basis of adjudication consists of judicial reasoning. It is an interpretive process—deliberate and justified—rather than a predictive process. According to Joseph Raz, the legitimacy of law is not represented by the capability to compute results but a rational explanation to those subjected to them.[67] Judges are not calculations devices interpreters law and human circumstance.

This obligation has been reiterated by the European Court of Human Rights (ECtHR). In *Hadjianastassiou v Greece*,[68] the Court stated that justice should not only be administered but it should be perceived to be administered, and that transparency and reason-giving are both necessary components of fairness. Similarly, in *Ruiz Torija v Spain*,[69] it declared that the courts have to demonstrate with enough specificity the reasons on which they ground their decisions, as the irrational results of decisions do not conform to Article 6 of the ECHR.

By contrast, AI systems employ probabilistic outputs and non-explainable neural weights rather than normative justification. They cannot meet the procedural requirement of giving reasons even when the results are statistically valid. According to scholars as Hildebrandt[70] and Mitchell et al,[71] algorithmic explanations tend to be post hoc which lack epistemic transparency. Accordingly, AI application in judicial reasoning poses a threat of turning justice

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[67] RAZ, Joseph (2009). *Between authority and interpretation: On the theory of law and practical reason.* Oxford: Oxford University Press.

[68] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 16 December 1992 in case *Hadjianastassiou v. Greece*, Application No. 12945/87. ECLI: CE:ECHR:1992:1216JUD001294587.

[69] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 9 December 1994 in case *Ruiz Torija v. Spain*, Application No. 18390/91. ECLI: CE:ECHR:1994:1209JUD001839091.

[70] HILDEBRANDT, Mireille (2020). (n 45)

[71] MITCHELL, Shira; POTASH, Eric; BAROCAS, Solon; D'AMOUR, Alexander; LUM, Kristian (2021). *Algorithmic fairness: Choices, assumptions, and definitions. Annual Review of Statistics and Its Application*, 8(1), pp. 141–163.

from a social process of deliberation to a solitary process of calculation that is dangerous to the principle of due process

1.3.2 Human-Centered Nature of Adjudication

Judicial decision-making is not mechanical but entails empathy, contextual understanding, and moral judgment. According to legal philosopher Ronald Dworkin, a judge understands law as an ongoing chain novel striking a balance between precedent, principle, and moral sense. This anthropomorphic view of adjudication is the opposite of AI logic that is not conscious or morally responsible. This human dimension is highlighted in the ECtHR case *Findlay v United Kingdom*.[72] The Court also stated that a fair trial must be conducted by an independent and unbiased tribunal created by law, and systems that fuse adjudicative and executive authority are unacceptable. In an algorithmic setting, the identical argument means that machine involvement so that there is no accountability dilutes the institutional lines.

Equally, in *Micallef v Malta*[73] the ECtHR once again stated that appearances matter, even the appearance of bias is enough to weaken judicial legitimacy. AI systems trained on biased data or developed by commercial companies carry a high risk of creating such an appearance, thereby eroding public trust.

This is repeated by the contemporary scholars. According to Yun-ah, AI adjudication does not provide the communicative accountability of human judgment and is therefore inappropriate in situations requiring moral persuasion.[74] Therefore, the usefulness of judicial reasoning not on speed or accuracy but that judgments have been made and guided by moral reasons.

1.3.3 Theories of Adjudication and the Threat of Algorithmic Substitution

Theories of adjudication have long distinguished between positivist, interpretivist, and procedural approaches. **H.L.A. Hart's positivism** views law as rules validated by social facts;

[72] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 25 February 1997 in case *Findlay v. United Kingdom*, Application No. 22107/93. ECLI: CE:ECHR:1997:0225JUD002210793.
[73] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 15 October 2009 in case *Micallef v. Malta*, Application No. 17056/06. ECLI: CE:ECHR:2009:1015JUD001705606.
[74] YUN-AH, Song (2025). *Ensuring AI accountability in judicial proceedings: An actor–network theory perspective. International Journal of Law and Criminology*, 5(3), pp. 1–7.

Dworkin's integrity theory demands moral consistency; and **Fuller's procedural natural law** centers on fidelity to process.[75]

AI is incompatible with all three theories. Within positivism, algorithms can mimic the application but interpretive discretion. They are unable to make reason based on principles under the integrity theory. perspective, black-box systems breach procedural morality the route between rule and outcome.

The threat is practical when algorithms start to impact on substantive judgment. In *Commission v Hungary*, the Court criticized Hungary on the prematurely terminations of the judge's tenure that judicial independence is an essential condition to the right to a fair trial.[76] This is not related to AI, but the reasoning is the same: when outside forces, be it political or technological, dictate the outcome of the judicial process, then its independence is lost.

Moreover, according to Fountain, algorithmic risk models incorporate past institutional biases as neutral data, which compromises independence and neutrality.[77] This epistemic obscurity conflicts with what Fuller termed the internal morality of law: which is the fact that laws are knowable, consistent and rationally applied. The normative coherence cannot be met by AI, which is based on statistical correlation and not normative.

1.3.4 Consistency, Legitimacy, and Procedural Fairness

Advocates frequently argue that AI helps to increase consistency by eliminating human error and subjectivity. But consistency in the laws is **not sameness but reasonableness**. Similar verdicts may be given by predictive analytics, but no explanation of similarity is justice. In the case of *Taxquet v Belgium*[78] decided by the ECtHR, the conviction without reasons given infringed the right to a fair trial provided by Article 6 ECHR. The Court emphasized that procedural fairness entails knowable reasons, and not statistical predictability.

Likewise, in *Hirvisaari v Finland*,[79] the Court once again asserted that fairness implies having the chance to comprehend and appeal a decision. In comparison, AI-based judgments

[75] FULLER, Lon L. (1969). *The morality of law.* New Haven: Yale University Press.
[76] **COURT OF JUSTICE OF THE EUROPEAN UNION.** Judgment of 6 November 2012 in case *European Commission v. Hungary*, Case C-286/12. ECLI: EU:C:2012:687
[77] FOUNTAIN, Jane E. (2022). *The moon, the ghetto and artificial intelligence: Reducing systemic racism in computational algorithms. Government Information Quarterly*, 39(2), 101645.
[78] **EUROPEAN COURT OF HUMAN RIGHTS (GRAND CHAMBER).** Judgment of 16 November 2010 in case *Taxquet v. Belgium*, Application No. 926/05. ECLI: CE:ECHR:2010:1116JUD000092605.
[79] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 27 September 2001 in case *Hirvisaari v. Finland*, Application No. 49684/99. ECLI: CE:ECHR:2001:0927JUD004968499

especially proprietary models frustrate contestability so that they produce what scholars call automation bias.[80]

It is then the transparency that forms the pivot of procedural legitimacy. Even correct results cannot be trusted by the people without elucidation. As O'Neil eloquently cautions in "Weapons of Math Destruction"[81], algorithms are views in code. Such views when left unquestioned within the courts are not met with justice but the opposite which will be institutionalized inequality.

Thus, procedural efficiency, but not the communicative, deliberative and normative aspects that render human adjudication legitimate may be provided by AI. **The due process is not a measure of performance, but a constitutional guarantee**. Automation, being what it is, makes privileges of functionality over justification, which is an inversion that places the principle of fairness at risk of being emptied out of itself.

1.4 Due Process: Historical and Legal Perspectives

Due process constitutes both a moral and procedural foundation of the rule of law. It symbolizes centuries of legal development in which the call to fairness has been a moral appeal which the constitution made a constitutional right. The history of artificial intelligence and the law of the concept deserves a breadth of understanding before assessing its fit with the judicial decision-making process. Due process is not a technical procedure but a human judgments reasoned, transparent and subject to review. legal traditions highlights why mechanization or the very pillars on which the legitimacy is built.

1.4.1 Evolution of Due Process

The due process doctrine has ancient roots in both **Roman law** and the **Magna Carta (1215)**, which provided that no free man should be deprived of liberty except through lawful judgment of his peers or by the law of the land. This principle became a pillar of procedural justice in legal traditions, and it is up to safe and foreseeable procedures that the state power is exercised.

[80] BURRELL, Jenna (2016). *How the machine "thinks": Understanding opacity in machine-learning algorithms. Big Data & Society*, 3(1), 2053951715622512.
[81] O'NEIL, Cathy (2017). *Weapons of math destruction: How big data increases inequality and threatens democracy.* New York: Crown.

By the seventeenth century, English jurists such as Sir Edward Coke had defined due process as a restriction on arbitrary power, establishing the precursor to contemporary constitutional safeguards.

Contemporary scholarship now acknowledges due process as the moral fabric of legality. inner morality of law generality, publicity and clarity as equitable application of law.[82] Buontempo claims that due process is the procedural version of human dignity - the personification of equality before the power structure.[83]

Thus, while technology may modernize adjudication, it cannot substitute for the moral grammar of due process. Algorithms may be predictive yet not legitimate, since fairness but justified.

1.4.2 Due Process under International Instruments

In the international arena, due process is enshrined as a fundamental right in human rights treaties. In the same way, fairness, impartiality, and access to an effective remedy are enshrined in Article 6 of the European Convention on Human Rights (ECHR, 1950) and Article 47 of the Charter of Fundamental Rights of the European Union (CFR, 2000).

ECtHR has continued to broaden the scope of these provisions. In De Cubber v Belgium (1984), it determined that the fact of bias breaches Article 6, thus determining the principle of appearance. In a case of *Brumararescu v Romania*, the Court held that arbitrary interference in final judgment was a denial of justice.[84]

In *Micallef v Malta*, the ECtHR applied the same to interim proceedings with an emphasis on the fact that due process should be applied even to simplified or urgent procedures.[85] Together, these determinations establish fairness as both procedural and substantive—requiring not only impartiality and independence but also transparency, equality of arms, and *reasoned justification.*

[82] FULLER, Lon L. (1969). (n 75)
[83] BUONTEMPO, N. (2015). A Discussion of Robert Alexy's Theory of Constitutional Rules and Constitutional Principles as a Model for Adjudication.
[84] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 28 October 1999 in case *Brumărescu v. Romania*, Application No. 28342/95. ECLI: CE:ECHR:1999:1028JUD002834295.
[85] **EUROPEAN COURT OF HUMAN RIGHTS.** *Micallef v. Malta*. (n 73)

As applied to AI, this jurisprudence suggests that non-transparent or non-interpretable algorithms and data-driven reasoning systems cannot fulfill these demands. AI impartiality humanly intelligible and the Articles 6 and 14.

1.4.3 Due Process under Lithuanian Constitutional and Procedural Law

In Lithuania, constitutional protection of due process is enshrined in Article 31 of the Constitution of the Republic of Lithuania, which provides that no person shall be convicted or found guilty of a crime except by a court of law in accordance with law.[86] The right to defense, trial in court and presumption of innocence are confirmed in the same article.

The Lithuanian Constitutional Court has consistently interpreted Article 31 as requiring not only formal but also substantive fairness. its 2006 decision on judicial independencestated that independence and impartiality are prerequisites of public trust towards the courts.[87]

These guarantees are further operationalized through the Code of Civil Procedure (2002) and Code of Criminal Procedure (2002) that imposes open hearings, balance of adversaries and logical decisions. In Supreme Administrative Court Case No. A-756-552/2019, the court overturned an administrative fine imposed through an automated traffic surveillance system. The court based its decision on the fact that administrative liability an automated process without human supervision. This national jurisprudence European nature, that technological not judicial accountability.

Thus, although e-Justice initiatives developed in Lithuania since 2020 have ensured digital modernization, the legal framework remains grounded in human control and judicial reasonableness as essential conditions of fairness. AI allowed to promulgate or affect judgments without human checkpoint, it constitutional standard of due process.

1.4.4 Contemporary Challenges to Due Process in Digital Adjudication

Digital transformation has created both opportunities and constitutional tensions. online hearings and e-filing greater integration of algorithmic tools in the adjudication process poses

[86] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*. (n 26)
[87] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras**.** (2019). *The constitutional experience of Lithuania in the context of European and global governance challenges.* In: *National Constitutions in European and Global Governance: Democracy, Rights, the Rule of Law: National Reports*, pp. 997–1046. The Hague: TMC Asser Press.

to the substance of due process. AI systems trained on data influenced by historical bias or an esoteric logic that generates algorithmic opacity law.[88]

Besides, automated decision support may inadvertently redistribute power, with judges normative power to technology vendors. In *Kruslin v France*, the ECtHR interpreted that any form of technology intrusion in the legal rights must be foreseeable and made available to an individual.[89] Where judicial AI operates on proprietary algorithms inaccessible to defendants, such systems necessarily contravene this principle.

Moreover, *Commission v. Poland* [90]reiterated that judicial independence under Article 19 TEU is incompatible with external influence—a criterion that AI governance must equally satisfy. Such influence may be advisory in nature, as algorithmic recommendations, but where judges follow them automatically or questioning.

Scholars such as *Yeung and* Harkens91 caution that AI-assisted adjudication creates a novel locus of responsibility outside the classic tripartite division of authority. This danger is further heightened by the fact that commercial vendors of AI purport to have intellectual property interest in judicial software, privatizing the aspects of justice.

Therefore, despite worldwide interest in digital modernization, the doctrinal trajectory of due process—from Magna Carta to the Constitution of Lithuania—leads unalterably to one conclusion: justice is legitimate only when it is human. Nevertheless sophisticated, AI cannot possess the interpretive empathy, moral judgment, and reasoning that make law a human undertaking.

1.5 Doctrinal Basis of Due Process and Artificial Intelligence

Having analyzed the historical and legal development of due process, it is necessary to examine its doctrinal foundations. These principles; fairness, independence, transparency and human dignity are not abstract, but enforceable principles that determine the legitimacy of judicial

[88] WACHTER, Sandra; MITTELSTADT, Bradley; RUSSELL, Chris. **(**2021). *Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI.* Computer Law & Security Review, 41, 105567.
[89] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 24 April 1990 in case *Kruslin v. France*, Application No. 11801/85
[90] **COURT OF JUSTICE OF THE EUROPEAN UNION.** Judgment of 15 July 2021 in case *Commission v. Poland*, Case C-791/19
[91] YEUNG, Karen; HARKENS, Adam. (2023). *How do 'technical' design choices made when building algorithmic decision-making tools for criminal justice authorities create constitutional dangers? Part II.* arXiv preprint arXiv:2301.04715.

power. These are the standards which any adjudication innovation, artificial intelligence, should be evaluated. However, as this shows, the logic of AIdata correlated, automated, and in direct opposition to these constitutional principles. facilitate the efficiency, technology cannot substitute the judgment, reason, and moral accountability which due process is founded.

1.5.1 Fairness and Equality of Arms

As the most fundamental aspect of due process, fairness presupposes that all parties in legal proceedings receive equal opportunity to present and contest evidence—a concept expressed in the doctrine of equality of arms. In Dombo *Beheer B.V. v Netherlands,* the European Court of Human Rights reiterated the same and added that procedural fairness requires that litigants receive an equal level of access to information and defense means.[92]

However, artificial intelligence jeopardizes such balance by creating disparities in technical knowledge, data access, and interpretative capacity. With such warnings, as Eubanks adds, the algorithms systems tend to reproduce the structural inequality in the name of being neutral.[93]

Regarding the case of *Al-Dulimi and Montana Management Inc. v Switzerland*,[94] the ECtHR stated that a fair decision entails making decisions that can be subjected to judicial review, particularly those made on the basis of extraneous technical information. When an AI model affects sentencing, bail, or case prioritization, its inner mechanisms are typically opaque to defendants, lawyers, and even judges—creating informational asymmetry incompatible with equality of arms.

Thus, although AI may increase procedural efficiency, it violates both the form and spirit of fairness when litigants cannot understand, challenge, or interrogate its rationale. This lack of contestability turns adjudication into unilateral calculation, the procedural guarantees of due process emptied.

1.5.2 Judicial Independence and Human Oversight

Judicial independence is both an institutional and personal safeguard, ensuring that judges possess the capacity to make decisions autonomously. This principle is enshrined in Article 6

[92] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 27 October 1993 in case *Dombo Beheer B.V. v. Netherlands*, Application No. 14448/88
[93] EUBANKS, Virginia. (2025). *Automating inequality: How high-tech tools profile, police, and punish the poor.* London: Macmillan + ORM.
[94] **EUROPEAN COURT OF HUMAN RIGHTS.** Grand Chamber Judgment of 21 June 2016 in case *Al-Dulimi and Montana Management Inc. v. Switzerland*, Application No. 5809/08

of the ECHR, Article 47 of the CFR and Article 31 of the Constitution of Lithuania.[95] In *Commission v Poland*, the CJEU decided that judicial independence needed not only to be free of political but also administrative interference.

The more insidious threat presented by artificial intelligence is algorithmic dependence. who suggestions risk machinegenerated patterns human judgment. According to scholars Yeung and Harkens, even advisory algorithmic help can normalize judicial reasoning.[96]

In *Campbell and Fell v United Kingdom*, the ECtHR emphasized that independence must involve the lack of indirect influences in judgment.[97] This is precisely the type of pressure exerted by AI systems designed by commercial vendors who, through intellectual property protections, introduce proprietary logic into courtroom processes.

The Constitutional Court of Lithuania (Case No. 14/05, 2006) emphasized that independence requires judges to personally consider decisions and arguments.[98] When AI gets involved in reasoning, responsibility moves to algorithm the opposite of independence. Autonomy in judicial interpretation needs interpretative ownership; algorithms however, encourage dependency under the guise of support.

1.5.3 Transparency, Explainability, and Accountability

Procedural legitimacy is based on transparency. In its absence, parties and the public cannot assess whether justice has been administered. In the case *Prins v Netherlands*, transparency and reasoning were identified by ECtHR as indivisible to the right to a fair trial.[99]

Nevertheless, most AI systems are "black boxes" whose logic remains inaccessible even to their creators. Such obscurantism compromises responsibility and explanation. In *Kerojarvi v Finland*,[100] the ECtHR was of the view that a decision made without intelligible reasoning does not pass the protection of Article 6 ECHR. The comparison is dramatic: when an algorithm explain conclusion, its results cannot reflect due process.

[95] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*. (n 26)
[96] YEUNG, Karen; HARKENS, Adam. (2023). (n 91)
[97] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 28 June 1984 in case *Campbell and Fell v. United Kingdom*, Applications Nos. 7819/77 and 7878/77.
[98] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*. (n 26)
[99] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 3 March 1995 in case *Prins v. Netherlands*, Application No. 25952/94
[100] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 19 July 1995 in case *Kerojärvi v. Finland*, Application No. 17506/90

This tension is explicitly recognized in the EU AI Act (2024/1689), which requires human oversight and explainability of so-called high-risk judicial applications. According to such scholars as Edwards and Veale, explainability is not only a technical prerequisite but also a constitutional requirement.[101]

Thus, introducing opaque or proprietary AI into judicial procedures not only contravenes transparency but also undermines accountability—an essential element of due process. When explanations are available, the moral power of judgment degenerates production.

1.5.4 Human Dignity and the Legitimacy of Adjudication

At the highest normative level, due process embodies respect for human dignity—the principle that each person has the right to be treated as a rational agent capable of comprehending and engaging in processes affecting their rights. Dignity is core of the Charter of Fundamental Rights of the European Union and is perceived by courts as a meta-principle on which fairness and transparency based.

In *Lăcătuș v. Switzerland*,[102] the ECtHR held that the right to dignity under Article 8 ECHR requires sensitivity to human vulnerability and personal circumstances, and criticized administrative interpretations that disregarded individual context. This of AIalgorithms no understanding or they are processors, not anecdotes.

In the second case of Right to be Forgotten (Federal Constitutional Court of Germany, 2019), the German Federal Constitutional Court also stated that data-driven systems should not violate personal dignity and the right to self-determination. Through such determinations, it has been affirmed that justice requires moral thinking, which AI is not capable of imitating.

Philosophers such as Binns argue that delegating moral judgment to AI systems amounts to abandoning the humanistic essence of justice.[103] Therefore, applying AI to court judgment law moral reasoning with reasoning.

1.6 Conclusion

[101] EDWARDS, Lilian; VEALE, Michael. (2017). *Slave to the algorithm? Why a 'right to an explanation' is probably not the remedy you are looking for.* Duke Law & Technology Review, 16, 18

[102] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 19 January 2021 in case *Lăcătuș v. Switzerland*, Application No. 14065/15

[103] BINNS, Reuben. (2022). *Human judgment in algorithmic loops: Individual justice and automated decision-making.* Regulation & Governance, 16(1), 197–211.

The above conceptual and doctrinal analysis portrays that legitimacy of judicial decision-making is founded on four permanent pillars namely fairness, independence, transparency, and human dignity. These principles have been developed over centuries of legal thinking to prevent arbitrariness of people and provide justice, which is both reasonable and human. Artificial intelligence, in contrast, has been developed as a non-moral and non-contextual probabilistic logic and statistical inference. Although it might maximise efficiency of the administration, it is unable to simulate the human reasoning or moral responsibility needed in adjudication. Any effort to mechanize judgment in this way is therefore liable to turn justice into a process of simulation, which, though efficient in its form, is empty in its substance.

CHAPTER TWO

2.0 ARTIFICIAL INTELLIGENCE IN JUDICIAL SYSTEMS AND ITS IMPLICATIONS FOR JUDICIAL REASONING

2.1 Introduction

The past decade has witnessed accelerated digitalization of justice systems, transforming administrative processes and evidence management. Artificial intelligence (AI) currently takes center stage in this development, thereby enhancing efficiency, consistency and data-driven decision-making in judicial systems. Courts in different jurisdictions have started to experiment with algorithmic case prediction and sentencing advice, document analysis and even preliminary adjudication. Advocates state that AI will relieve the workload, increase objectivity, and decrease human error. Nevertheless, these developments pose some deep-seated constitutional and ethical concerns as well. Whether AI can make the processes more efficient is not the key question, but rather whether such a practice is in line with the long-term values of judicial reasoning and due process.

By its nature, adjudication involves interpretative judgment, contextual evaluation, and moral accountability—distinctly human elements that cannot be mechanized. The culture of fairness, independence, and transparency will be compromised when the judicial rationale is mediated by algorithmic systems. This tension can be emphasized by experience in early implementations. In *State v. Loomis*,[104] the court cautioned that risk-assessment algorithms, despite their apparent objectivity, would continue to promote bias and obscure the rationale behind sentencing. Similarly, the French *Conseil d'État* in *La Quadrature du Net v. Prime Minister*[105] underlined that automated analysis of data in administrative justice should be subservient to human judicial controls. Such cases demonstrate that algorithmic logic, when allowed to intrude into decision-making, alters the epistemological basis of justice from reasoned deliberation to probabilistic prediction.

The European Union's 2024 *Artificial Intelligence Act* [106] reinforces these concerns by classifying AI systems used in judicial contexts as "high-risk," demanding strict compliance with principles of transparency, human oversight, and accountability. Yet even under such

[104] **SUPREME COURT OF WISCONSIN.** *State v. Loomis* (n 32).
[105] **COUNCIL OF STATE OF FRANCE (CONSEIL D'ÉTAT).** Judgment of 21 April 2021 in case *La Quadrature du Net v. Prime Minister*, No. 393099. ECLI: FR:CECHR:2021:393099.20210421.
[106] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24).

regulation, judicial interpretive independence may be compromised once machine-generated recommendations begin influencing outcomes. This emerging dynamic, already visible in countries such as Estonia, China, and Brazil, indicates a fundamental shift: courts are moving from arbiters of law to supervisors of algorithms. [107] Efficiency gained at the expense of interpretive depth is a danger that will turn justice into an automated process, lacking human conscience. The following segments thus analyze the shapes, roles and implications of AI adoption in the judicial systems, emphasizing how such technological substances, although innovative, represent a subtle, yet significant danger to the integrity of judicial reasoning through its doctrine and procedure.

2.2 Types of AI Tools Used in Legal Systems

The increasing integration of artificial intelligence in judicial administration signals a paradigm shift in how courts process information, evidence, and decisions. Although AI technologies were initially limited to automation of clerical tasks, they have started to affect the fundamental processes of the court system, including legal reasoning, sentencing, and the management of procedures. The instruments vary in both scale and sophistication, such as data-driven legal research engines to predictive sentencing software and AI-assisted case-flow systems. They have been defended on grounds of efficiency, uniformity and accessibility but their effect on interpretive independence and due process remains controversial. To assess these technologies as strengthening or weakening the human judicial authority, it is necessary to understand them, their usage, and limitations.

2.2.1 AI-Assisted Legal Research and Document Review

Artificial intelligence has revolutionized the process of legal research through automation of retrieval of precedent, document classification and legal analytics. The contemporary systems are based on the Natural Language Processing (NLP), semantic search, and predictive text modeling to find pertinent legal authorities and create case summaries much quicker than the conventional techniques. [108] Lexis+ AI, Westlaw Edge, CaseText CoCounsel, and ROSS Intelligence are among the most popular, they are meant to analyze plain-language searches

[107] TAHURA, Ummey Sharaban; SELVADURAI, Niloufer (2022). *The use of artificial intelligence in judicial decision-making: The example of China. International Journal of Law, Ethics and Technology*, 1.

[108] KATZ, Daniel M.; HARTUNG, Dirk; GERLACH, Lukas; JANA, Anjan; BOMMARITO II, Michael J. (2023). *Natural language processing in the legal domain. arXiv preprint*, arXiv:2302.12039.

and provide a specific legal answer. [109] An example is Lexis+ AI, released by LexisNexis in 2023, which uses large language models to generate draft legal arguments and check citations, and Westlaw Edge incorporates AI-based KeyCite to indicate that its authority has been potentially overruled. [110]

Even judicial institutions already started adopting AI in the review of documents and drafting of judgments. The internal NLP system employed by the European Court of Human Rights (ECtHR) is called HUDOC+ and it de-jurisdictionalises by thematic tag to help clerks and judges to cope with the increasing case load. [111] On the same note, in Canada, the British Columbia Civil Resolution Tribunal (CRT) uses a triage tool that is automated to categorize new claims and generate plain-language summaries, which must be reviewed by humans. [112] Such systems make the administration faster and regular, however, at the cost of promoting excessive dependence on algorithmic search hierarchies...

One of the most common criticisms is that algorithmic research engines, despite their efficiency, have a tendency to promote majority or more commonly used judgments, which strengthen dominant interpretations and disregard opposing or new line of reasoning. [113] According to Derlén and Lindholm, [114] it is a structural bias, known as "algorithmic centrality", which is the process that reduces the interpretive diversity of judicial reasoning in a subtle way. Moreover, the majority of commercial systems are black box proprietary, and it is not possible to verify externally their selection logic. Such appearance is detrimental to transparency and contestability, which are key to due process in the long term. [115] The use of privately created algorithms in the public court also brings on more questions of legitimacy: the fact that the courts have to rely on the undisclosed computerization parameters to interpret the law jeopardizes the notion of the reasoned decision-making.

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[109] TU, Sherry S.; CYPHERT, Amy; PERL, Sarah J. (2023). Artificial intelligence: Legal reasoning, legal research and legal writing. Minnesota Journal of Law, Science & Technology, 25, p. 105.
[110] AKINER, Tugce; PUNURU, Jaswanth; SHARMA, Saurabh (2023). *Intent Classification and Dialogue Management for Lexis AI.* In: *Proceedings of the 7th Annual RELX Search Summit.* RELX Group
[111] MEDVEDEVA, Masha; VOLS, Michel; WIELING, Martijn (2020). *Using machine learning to predict decisions of the European Court of Human Rights. Artificial Intelligence and Law*, 28(2), pp. 237–266.
[112] SALTER, Shannon (2017). *Online dispute resolution and justice system integration: British Columbia's Civil Resolution Tribunal. Windsor Yearbook of Access to Justice*, 34(1), pp. 112–129.
[113] MART, Susan Nevelow (2017). *The algorithm as a human artifact: Implications for legal [re]search. Law Library Journal*, 109, p. 387.
[114] DERLÉN, Mattias; LINDHOLM, Johan (2017). *Measuring centrality in legal citation networks – a case study of the HITS and PageRank algorithms. SSRN Electronic Journal*
[115] FOSS-SOLBREKK, Kristoffer (2023). *Searchlights across the black box: Trade secrecy versus access to information. Computer Law & Security Review*, 50, 105811. https://doi.org/10.1016/j.clsr.2023.105811

As a result, although AI-aided legal research can improve the efficiency of the procedure, it also introduces an epistemic hierarchy where the so-called "datafied" takes the place of "deliberative". [116] Such a shift erodes the core principles of judicial independence, which is the possibility of interpreting the law without technological or commercial pressure.

2.2.2 AI in Sentencing, Risk Assessment, and Predictive Analytics

Criminal justice systems are becoming more and more dependent on artificial intelligence to help with sentencing, parole, and bail decisions using risk-assessment algorithms. These predictive technologies are based on data analytics and pattern recognition to predict the likelihood of a defendant re-offending, sentencing a person accordingly, or doing an early-release assessment. However, commercialized as tools of uniformity and objectivity, these systems tend to introduce biases that jeopardize the fairness and transparency of due process. [117]

These systems have largely been dominated by the most popular of them, the COMPAS (Correctional Offender Management Profiling Alternative Sanctions), which has been extensively used in U.S. state courts to assess recidivism risk. Nevertheless, it is proprietary, and its algorithms cannot be examined by society, which is a constitutional issue of the right to dispute evidence. [118] In *State v. Loomis*, the court affirmed the use of COMPAS but cautioned sentencing judges against using its results as the decisive factor. The case revealed a paradox of AI-assisted justice: systems that are intended to minimize human subjectivity can eventually promote untraceable forms of technological bias.

Other jurisdictions have raised similar concerns. The ministry of Justice in the United Kingdom has tested AI-assisted parole assessments based on predictive analytics on data of prisoner behaviour, however, later audits have revealed skewed risk assessments against ethnic minorities. [119] The discontinued SyRI (System Risk Indication) program was a project combining social welfare and criminal data in the Netherlands, which, predicting the probability of fraud, was declared by the District Court of The Hague in *NJCM c. v*

[116] MARCOTTE, Ryan (2025). *AI-assisted legal research: AIALR. Legal Information Management*, 25(2), pp. 84–98
[117] BAROCAS, Solon; HARDT, Moritz; NARAYANAN, Arvind (2023). *Fairness and machine learning: Limitations and opportunities.* Cambridge, MA: MIT Press
[118] CARLSON, Anna M. (2017). *The need for transparency in the age of predictive sentencing algorithms. Iowa Law Review*, 103, pp. 303–330
[119] Ibid

Netherlands, as a violation of the transparency and proportionality principles of the European Convention on Human Rights, under Article 8. [120] [121]

The VICTOR AI system was presented in Brazil in Supremo Tribunal Federal in Latin America to speed up the constitutional adjudication process by automatically categorising petitions. Although the model was efficient in its administration, the researchers found that the model focused on the most common types of claims thus sidelining complex or minority problems. [122] [123] In China, the Smart Court system directly incorporates algorithmic sentencing suggestions into the work interfaces of the judges, which has caused concerns that machine-generated results might be quietly influencing the decision-making process of the judges. [124]

Through these experiences, we find a common problem in the whole world; predictive systems are efficient but they are also threatening the fundamental aspects of judicial independence especially the need to deliver personalized reasoning. Scholars like Ugwudike and Castro-Toledo suggest that algorithmic risk assessment is dangerous because it leads to normalization of the so-called "data-driven" justice, where legal reasoning is replaced by statistical inference. [125] [126] This modification compromises the right to a fair trial because it weakens the discretion of the judicial system and interpretive contexts. With predictive analytics becoming an increasingly powerful influencer in sentencing around the world, the issue has not been to abandon the use of technology but to make sure that a human judgment, anchored in moral reasoning and procedural fairness remains the final arbiter of justice.

[120] **DISTRICT COURT OF THE HAGUE (RECHTBANK DEN HAAG).** Judgment of 5 February 2020 in case *NJCM c.s. v. De Staat der Nederlanden (SyRI)*, Case No. C/09/550982 / HA ZA 18-388, ECLI: NL:RBDHA:2020:1878. Rechtspraak.nl Database

[121] MEUWESE, Anne (2020). *Regulating algorithmic decision-making one case at a time: A note on the Dutch "SyRI" judgment. European Review of Digital Administration & Law*, 1(1), pp. 209–211

[122] RESCK, Lucas; MORENO-VERA, Felipe; VEIGA, Tobias; PAUCAR, Gerardo; FAJRELDINES, Ezequiel; KLAFKE, Guilherme; NONATO, Luis G.; POCO, Jorge (2025). *LegalAnalytics: Bridging visual explanations and workload streamline in Brazilian Supreme Court appeals. Artificial Intelligence and Law*, 1–59.

[123] BECKER, Daniel; FERRARI, Isabela (2020). *Victor, the Brazilian Supreme Court's artificial intelligence: A beauty or a beast? Regulação*, 4, pp. 1–10.

[124] PAPAGIANNEAS, Straton; JUNIUS, Nino (2023). *Fairness and justice through automation in China's smart courts. Computer Law & Security Review*, 51, 105897.

[125] UGWUDIKE, Pamela (2021). *Data-driven algorithms in criminal justice: Predictions as self-fulfilling prophecies.* In: *Data-Driven Personalisation in Markets, Politics and Law*, pp. 190–204. Cambridge: Cambridge University Press.

[126] CASTRO-TOLEDO, Francisco J.; MIRÓ-LLINARES, Fernando; AGUERRI, Jesús C. (2023). *Data-driven criminal justice in the age of algorithms: Epistemic challenges and practical implications. Criminal Law Forum*, 34(3). Dordrecht: Springer Netherlands.

2.2.3 European Applications of AI in Judicial Systems

The global landscape of AI adoption in courts reveals striking diversity in motivations and governance approaches. While some jurisdictions have embraced automation to manage overwhelming caseloads, others have exercised restraint to safeguard judicial independence. The most illustrative cases demonstrate both the potential and peril of relying on algorithmic tools to administer justice.

Within Europe, countries have adopted significantly different approaches to integrating artificial intelligence in courts. Estonia has been frequently described as the leader in digital justice however, according to official sources, no independent AI judge in its courts. [127] Rather, the Ministry of Justice has algorithmic clerical support, the wider e-File and e-Court digitalization strategy. [128] In these systems, automation administrative work and small claims, but ultimate decisions are fully human signature.[129][130] Estonian authorities as augmentative adjudicativea hybrid AI efficiency judicial thinking and discretion.[131]

By contrast, France has adopted a restrictive legislative approach. Law No. 2019-22, in Article 33, outlaws the publication of statistical models of judicial conduct prediction and its analysis. [132] This prohibition tools created by private companies judicial use in litigation According to the government, predictive analytics could judicial independence and put judges under reputational pressure.[133] policy qualitative reasoning a philosophical utilitarian adoption in non-European jurisdictions.

Elsewhere in Europe, Spain has adopted a pragmatic approach to judicial digitalization. The General Council of the Judiciary (CGPJ), via its Judicial Documentation Centre (CENDOJ), intelligence-based applications including the Document Structuring natural language processing application that classifies and organizes judicial documents. These systems promote

[127] ESTONIAN MINISTRY OF JUSTICE (2022). *Estonia does not develop AI judge.* Tallinn: Government of Estonia.
[128] HARMAND, Kai (2023). AI systems' impact on the recognition of foreign judgments: The case of Estonia. Juridica International, 32, pp. 107–118
[129] ESTONIAN MINISTRY OF JUSTICE (2022). (n 24)
[130] HARMAND, Kai (2023) (n 128)
[131] FABRI, Marco (2024). *From court automation to e-justice and beyond in Europe. International Journal for Court Administration (IJCA)*, 15, p. 1.
[132] **FRENCH REPUBLIC (MINISTRY OF JUSTICE).** (2019). *Law No. 2019-222 of 23 March 2019 on the Programming 2018–2022 and Reform of the Justice System*, Article 33. *Journal Officiel de la République Française*, 24 March 2019
[133] SHEFET, Dan (2020). *Profiling of judges.* The ALI Adviser.

uniformity and rulings supporting transparency in legal information management. [134] [135] However, researchers warn that data-based classification judicial interpretation, reasoning pattern over years. [136] This issue was echoed in *Fundacion Civio v Ministry for the Ecological Transition the* Spanish Supreme Court of the BOSCO algorithm to guarantee transparency and judicial responsibility.[137]

At the broader level, the EU Artificial Intelligence Act (Regulation 2024/1689) classifies judicial AI systems as high-risk applications requiring conformity assessments, documentation, and human oversight. The Act the continuation of the Ethical Charter on AI in Judicial Systems (2018), which principles of transparency, accountability, and human control.[138] regulatory that algorithmic innovation should not constitutional and procedural protections.

Comparison of global and European experiences underscores a key insight: the challenge lies not in adopting AI but in governing it. Jurisdictions that priorities oversight like France and the EU preserve the doctrinal integrity of due process, while those pursue automation as efficiency policy risk replacing reasoned adjudication with procedural mimicry of system.

2.3 Influence of AI on Judicial Interpretation and Reasoning

The emergence of artificial intelligence in judicial procedures raises fundamental questions about the nature and integrity of judicial reasoning. Courts gain legitimacy not efficiency or correctness but rational and expression of law and morality. When AI enters interpretive spaces advisory program or decision-making, it threatens to change the human deliberation basis to a computational process.

2.3.1 AI as Advisory Versus Substitutive Tools

The distinction between *AI as advisory tool* and *AI as substitutive agent* demarcates the boundary between technological assistance and judicial abdication. Advisory systems assist human judges by summarizing evidence, precedents or statutory inconsistencies. Substitutive systems, turn, to model or simulate human legal and probabilistic predictions. The argument

[134] CENDOJ (2021). *The use of artificial intelligence in the justice field.* General Council of the Judiciary of Spain.
[135] GALINDO AYUDA, Fernando (2024). *Artificial intelligence and access to legal documentation and carrying out judicial activities (Inteligencia artificial para el acceso a documentación jurídica y la realización de actividades judiciales). Scire*, 30(1), pp. 27–47
[136] Ibid
[137] **SUPREME COURT OF SPAIN.** Judgment of 18 September 2025 in administrative case No. STS 1123/2025 (*Fundación Civio v. Ministry for the Ecological Transition – BOSCO Transparency Case*).
[138] **COUNCIL OF EUROPE.** *European Ethical Charter on AI in Judicial Systems*. (n 58)

of scholars like Kazim and Tomlinson is that even so-called consultative systems may have disproportionate power by creating so-called "automation bias", the cognitive bias that prompts an individual to trust the results of a machine[139]

Empirical studies reveal that judges frequently perceive AI-generated recommendations as objective or neutral, despite being products of subjective design choices and biased data. [140] The *State v. Loomis* decision in the United States and the *SyRI* case of *NJCM v. Netherlands* both demonstrate how courts struggle to balance technological efficiency with the human duty to reason. [141] [142] In both cases, judges did not reject AI-assisted processes outright but cautioned against their uncritical application. These instances demonstrate that even non-binding algorithmic advice may direction, thus compromising autonomy, a vital component of due process.[143]

2.3.2 Effects on Judicial Independence and Context Sensitivity

The reasoning in the courts is contextual by nature- it balances facts, precedents and morality within the confines of a just and fair decision. In comparison, AI models are based on statistical generalization and recognition of patterns. This epistemic difference is a challenge to the concept of individualized justice. According to a study by Grimmelikhuijsen and Meijer, the authors find six challenges to algorithmic decision-making as a systemic threat to legitimacy, such as lack of contestability, normative rigidity, and opacities. [144]

In *Commission v. Poland*, The CJEU further established that judicial independence does not only mean being free of extrinsic influence, but also institutional protections that promote an impartial and deliberative autonomy. In any event where algorithmic systems influence or limit the discretion of the judges, they threaten to create new types of dependency; dependency on programmers, commercial enterprises, or state technocrats. European constitutional scholars like Jarukaitis and Švedas have also highlighted interpretive reasoning as a protection of

[139] KAZIM, Tatiana; TOMLINSON, Joe (2023). *Automation bias and the principles of judicial review. Judicial Review*, 28(1), pp. 9–16.
[140] GRAVETT, Willem H. (2023). *Judicial decision-making in the age of artificial intelligence.* In: *Multidisciplinary Perspectives on Artificial Intelligence and the Law*, pp. 281–297. Cham: Springer International Publishing.
[141] **SUPREME COURT OF WISCONSIN.** *State v. Loomis* (n 32).
[142] **DISTRICT COURT OF THE HAGUE (RECHTBANK DEN HAAG).** *NJCM c.s. v. De Staat der Nederlanden (SyRI)* (n 120)
[143] GRAVETT, Willem H. (2023). (n 140)
[144] GRIMMELIKHUIJSEN, Stephan; MEIJER, Albert (2022). *Legitimacy of algorithmic decision-making: Six threats and the need for a calibrated institutional response. Perspectives on Public Management and Governance*, 5(3), pp. 232–242

arbitrariness as one of the main tendencies of European constitutional traditions. [145] Replacing that human interpretive process by statistical inference would be a mistake, which would be to substitute the rule of law with the rule of algorithms.

Further, machine reasoning is not socio-legally sensitive. Artificial intelligence is not capable of comparing moral and cultural context or any principles of mercy, proportionality, or the dynamic nature of justice. In *Findlay v. United Kingdom*, the European Court of Human Rights stressed that fairness must be "assessed in light of the proceedings as a whole," a standard impossible to replicate through algorithmic logic. [146] The shift toward machine-informed adjudication thus endangers the balance between rule application and equitable judgment—an equilibrium central to due process

2.3.3 Transparency and the Problem of Explainability

The other area of concern in the doctrines is the explainability- the possibility to comprehend and question AI reasoning procedures. Courts are subjected to a requirement to provide reasons behind their decision making, which is a principle of procedural fairness that was renewed in *Taxquet v. Belgium*. [147] However, many AI models, most especially those based on deep learning, produce statistically sound outputs that are conceptually invisible. Wachter, Mittelstadt, and Russell describe this as the "opacity dilemma": the more accurate an algorithm becomes, the less interpretable it is to human observers. [148]

From a due process perspective, this secrecy contravenes the right of the litigant to dispute against the negative evidence. In a case of *Al-Dulimi and Montana Management Inc. v. Switzerland*, the Strasbourg Court determined that citizens have to have a possibility to question the logic that supported the decisions in relation to their rights. [149] When the rationalization is based on unreachable code or machine learning models, the procedural assurance of rationale judgment breaks down. Therefore, the explainability is not only the technical but the constitutional necessity that the justice should be perceived and comprehensible.

[145] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)
[146] E**UROPEAN COURT OF HUMAN RIGHTS.** *Findlay v. United Kingdom* (n 72)
[147] **EUROPEAN COURT OF HUMAN RIGHTS.** *Taxquet v. Belgium* (n 78)
[148] WACHTER, Sandra; MITTELSTADT, Brent; RUSSELL, Chris (2021). (n 88)
[149] **EUROPEAN COURT OF HUMAN RIGHTS.** *Al-Dulimi and Montana Management Inc. v. Switzerland* (n 94)

2.3.4 Balancing Efficiency with Interpretive Legitimacy

The growing enthusiasm for "data-driven justice" reflects a managerial conception of law which reflects treating courts as systems of throughput rather than arenas of moral reasoning. Yet legal legitimacy derives not from predictive accuracy but from the persuasive force of rational deliberation. [150] An all-efficient, but inexplainable judiciary would not pass the test of fairness. This is recognized in the EU Artificial Intelligence Act (2024/1689) as it requires humans to exercise control of high-risk applications, such as judicial and law enforcement systems. This system of regulation affirms that AI can help, but it must never substitute the judicial process of judgment which, according to Article 31, Lithuanian constitutional law, provides fair, open, and reasonable adjudication. [151]

Thus, while AI has an advantage in the administration, its integration into judicial reasoning presents an existential challenge: it may turn the judicial system into a technocratic machine instead of a moral institution. Preserving due process in the digital age therefore requires maintaining the interpretive and ethical primacy of human judgment over algorithmic output..

2.4 Risk Assessment: Bias, Transparency, and Accountability

The central issue about artificial intelligence in judicial decisions is the risk assessment. Even when AI-based risk models were originally created to promote consistency, they tend to recreate systemic disparities and put the procedural fairness that underlies due process at risk. In law, risk assessment is defined as including not only those tools that attempt to predict recidivism or sentencing severity but also the institutional dangers of biased information, black box algorithms and insufficient accountability measures.

Article 6 of the European Convention on Human Rights (ECHR), Article 31 of the Lithuanian Constitution (1992), and the EU Charter of Fundamental Rights (Article 47) provides the principle of due process, which prescribes all decisions of judicial character to be unbiased, justified, and clear. However, AI systems can be black-box systems, where the output is unreasonable. This dynamic changes the role of judiciary not to be an interpreter but a supervisor of the algorithmic processes- the reversal of the very autonomy that justifies the

[150] RAZ, Joseph (2009). (n 67)
[151] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania* (1992) (n 26)

judicial power. [152] The following subsections discuss the three threats, namely, bias, opacity, and weak accountability, which jointly compromise fairness in AI-mediated justice

2.4.1 Algorithmic Bias and Discrimination

Bias in judicial AI systems arises from three principal sources: **data bias**, **design bias**, and **societal bias**.

- **Data bias** occurs when algorithms are trained on historical legal or policing records that reflect structural discrimination—such as overrepresentation of certain ethnic or social groups.
- **Design bias** emerges from developers' subjective choices in feature selection, weighting, and performance metrics.
- **Societal bias** manifests when systemic inequalities outside the legal system are computationally reproduced within it (Mehrabi et al., 2022; link).

The example that has been best examined is the COMPAS system in the United States to estimate recidivism. A ProPublica study conducted independently revealed that Black defendants had almost twice the likelihood in comparison with white defendants to be incorrectly labeled as a high-risk offender. [153] Although the *State v. Loomis*[154] judgment acknowledged these risks, the court did not prohibit the use of COMPAS in the future, which proves the unwillingness of the judicial system to address the issue of algorithmic bias directly. It is a procedural paradox, as although human bias is deplored, technological bias is frequently accepted in the name of efficiency.

Algorithms discrimination has also been a source of concern in Europe. The SyRI program of the Netherlands, which is a predictive analytics scheme to detect welfare and tax fraud, was struck down in *NJCM v. Netherlands* on the violation of privacy and equality rights under Article 8 ECHR.[155] The judge ruled that the opaque scoring of the risks by SyRI was not proportionate and transparent and thus the judicial review was not possible. This case was an

[152] HUQ, Aziz Z. (2024). (n 53)
[153] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren (2022). *Machine bias.* In: *Ethics of Data and Analytics*, pp. 254–264. Boca Raton: Auerbach Publications
[154] **SUPREME COURT OF WISCONSIN.** *State v. Loomis* (n 32).
[155] **DISTRICT COURT OF THE HAGUE (RECHTBANK DEN HAAG).** *NJCM c.s. v. De Staat der Nederlanden (SyRI)* (n 120)

unusual one in which the European jurisprudence acknowledged algorithmic inaccessibility to be a substantive violation of due process.

Even apparently impartial AI tools such as case classification or documents sorting may strengthen gender or language bias. It has been found that natural language models that are trained with legal corpora tend to identify defendant using male pronouns, and caregiver using female pronouns. [156] These latent linguistic patterns when incorporated in judicial databases influence in subtle ways the interpretive results by affecting the manner in which legal facts are accessed and framed.

Equality and non-discrimination have been set as the minimum principles of processing automated by the EU General Data Protection Regulation (GDPR) and Charter of Fundamental Rights (Articles 21–22). But these structures are not adequately enforced in the legal setting, where algorithms are not taken as a decision-making structure but seen as facilitative. This loophole in the regulation enables bias to go unchecked. Researchers believe that algorithmic fairness can never be obtained through just a dataset diversity but must be normatively aligned with justice principles, which are problems of human work. [157]

In Lithuania and other civil law systems, judicial impartiality is grounded in the fact that every individual must be tried by a competent and independent and fair tribunal, ensured in the Constitution. [158] Algorithms based on biased decision-making that inserts even probabilistic bias accordingly violate constitutional and human rights norms. According to Lithuanian scholars Jarukaitis and Švedas [159], procedural fairness is not a quantitative concept of consistency but a qualitative standard that is based on a reasonable human judgment. Thus, the doctrinal nature of due process itself is undermined by any interferon, algorithmic, meddling with equality before the law.[160]

In Lithuania and other civil law systems, judicial impartiality is grounded in the constitutional guarantee that every individual must be tried by a competent, independent, and impartial tribunal. [161] Algorithms biased decision-making even probabilistic bias violate constitutional

[156] SEVIM, Nurullah (2023). *Analysis of gender bias in legal texts using natural language processing methods.* Master's thesis, Bilkent Universitesi (Turkey)
[157] BAROCAS, Solon; HARDT, Moritz; NARAYANAN, Arvind (2023). (n 117)
[158] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania* (1992) (n 26)
[159] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)
[160] BAROCAS, Solon; HARDT, Moritz; NARAYANAN, Arvind (2023). (n 117)
[161] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania* (1992) (n 26)

and human rights norms. According to Lithuanian scholars Jarukaitis and Švedas[162], procedural fairness is not a quantitative concept of consistency but a qualitative standard human judgment.

2.4.2 The "Black Box" Problem and the Need for Explainability

The most urgent issue of the AI implementation in judicial systems is, perhaps, the so-called black box problem, i.e. the impossibility to comprehend the work of sophisticated algorithms that lead to their results. In contrast to conventional expert testimony or written arguments, AI models, specifically deep learning models, are not able to explain their inner logic in a way that is understandable to a human. This non-transparency reaches the core of due process, which demands that any legal judgment is limited to being reasoned, reviewable, and contestable [163]

2.4.2.1 Opacity as a Threat to the Right to a Reasoned Decision

The **European Court of Human Rights (ECHR)** has long held that judicial decisions must provide sufficient reasoning to enable litigants to understand the basis of the judgment and to exercise the right of appeal. In *Taxquet v. Belgium*, [164] the Court pointed out that the obligation of reasons giving is a crucial part of a fair trial, and that Article 6 of the Convention subjects it to it. In the same way, the Court in *Al-Dulimi and Montana Management Inc. v. Switzerland* [165] stated that persons have to have the right to appeal the reasons behind the decisions that influence their rights. As judicial reasoning is subcontracted to black-box algorithms, this procedural guarantee fails, litigants have no real way to challenge an outcome in which the reasoning has been obscured by a code.

National courts have begun to grapple with this challenge. In *German Federal Constitutional Court*, the Court presupposed that the decision made under the influence of automated data analysis must be understandable by those affected by it in Germany Federal Constitutional Court. [166] The decision implicitly upheld the fact that the explainability is not a technical luxury, but it is also a constitutional necessity. The same idea forms the basis of the General Data Protection Regulation (GDPR) Article 22, where the right to not be subject to the exclusively automated decision-making is granted to the individuals without the consideration

[162] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)
[163] BURRELL, Jenna (2016). (n 80)
[164] **EUROPEAN COURT OF HUMAN RIGHTS.** *Taxquet v. Belgium* (n 78)
[165] **EUROPEAN COURT OF HUMAN RIGHTS.** *Al-Dulimi and Montana Management Inc. v. Switzerland* (n 94)
[166] **FEDERAL CONSTITUTIONAL COURT OF GERMANY (BUNDESVERFASSUNGSGERICHT).** Judgment of 24 July 2013 in constitutional complaint No. 1 BvR 16/13. ECLI: DE:BVerfG:2013:rs20130724.1bvr001613

of a meaning human factor. However, as Wachter, Mittelstadt, and Russell note, the GDPR protections are mostly procedural one (emphasizing the notice and permission as opposed to the interpretability of the underlying algorithmic logic).[167]

2.4.2.2 Explainable Artificial Intelligence (XAI) and Its Legal Limits

Scientists have reacted to this lack of transparency by designing Explainable Artificial Intelligence (XAI)-systems that are aimed at giving understandable information about model behaviour. They are LIME (Local Interpretable Model-agnostic Explanations) and SHAP (Shapley Additive Explanations) that provide simplified explanations of complicated models. [168] Nevertheless, according to legal scholars, the technical explainability does not correspond to the juridical reasoning. AI explanations could explain the impact that input variables have on an outcome, but cannot provide normative reasons, such as the reason an outcome is fair, proportionate, or consistent with precedent. [169]

Courts basing their operations on the outputs of XAI then encounter a paradox whereby transparency might enhance visibility and not accountability. A judge can also accept the recommendation of a model that lacks normative weaknesses as a probabilistic one without being aware of its inadequacies. Procedural transparency does not imply substantive justice as Veale and Zuiderveen Borgesius contend. [170] The only way to ensure that technological traceability is in concert with legal reasoning is to ensure that the rationale provided by the judiciary decision is essentially human.

2.4.2.3 Judicial Accountability and the Illusion of Oversight

Explainability is also in common with accountability. The judges are not relieved of the responsibility but the AI systems blur accountabilities by spreading the agency among the programmers, vendors, and institutions. This delegated responsibility makes the responsibility in question less definite, as it is not clear who is accountable whenever algorithmic suggestions result in wrongful convictions. [171]

The EU Artificial Intelligence Act (Regulation 2024/1689) attempts to reverse this by categorizing judicial AI systems as high-risk and subject to human supervision, record-keeping

[167] WACHTER, Sandra; MITTELSTADT, Brent; RUSSELL, Chris (2021). (n 88)
[168] DOSHI-VELEZ, Finale; KIM, Been (2017). *Towards a rigorous science of interpretable machine learning. arXiv preprint* arXiv:1702.08608
[169] EDWARDS, Lilian; VEALE, Michael (2017). (101)
[170] VEALE, Michael; ZUIDERVEEN BORGESIUS, Frederik (2021). *Demystifying the draft EU Artificial Intelligence Act. arXiv preprint* arXiv:2107.03721.
[171] CONTINI, Francesco; ONTANU, Elena Alina; VELICOGNA, Marco (2024) (n 11)

as well as algorithmic transparency. [172] Yet, the relative dependence of the regulation on ex-ante conformity testing is not much in guaranteeing interpretive explainability on post-deployment. Regulatory compliance, according to Hendrickx, cannot replace the human obligation to provide reasons a phenomenon that maintains moral legitimacy of law as such. [173]

Finally, the black-box problem transforms the character of judicial reasoning into a discursive to a statistical one. The courts relying on AI to create or support judgments are prone to turning justice into a black box more than a transparent and deliberative procedure. And in the absence of complete human interpretability, the efficacy of AI is a constitutional liability and not a technological virtue.

2.4.3 Accountability and Governance Frameworks

The most complicated issue of the modern legal regulation is the assurance of accountability in the application of artificial intelligence to the judicial system. Although policymakers are becoming aware of the dangers of black box algorithms, most regulation laws encompass the compliance aspect of procedural audit, documentation, and oversight as opposed to substantive assurances of fairness and reasoned judgment. Accountability has been bureaucratised in effect: the AI systems can meet the technical standards, but their output still can be the infringement of the moral and constitutional principles of due process.

2.4.3.1 Institutional Frameworks and Their Limitations

The EU Artificial Intelligence Act (2024/1689) is the grandest legislative move to hold companies responsible in the use of AI in the courts. It categorizes judicial and law-enforcement applications as high-risk, which need human oversight, algorithmic non-secrecy, and conformity evaluations. Yet, opponents believe that the duties of the Act are more ex ante-oriented, which is centered on how the system is designed and not ex post-judicial. [174] Such procedural emphasis puts at risk the formation of a compliance culture in the absence of actual accountability, in which algorithms are verified as being trustworthy despite not being comprehensible or biased in their output.

[172] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24)
[173] HENDRICKX, Victoria (2025). (n 46)
[174] VEALE, Michael; ZUIDERVEEN BORGESIUS, Frederik (2021). (n 167)

A complementary soft-law tool, the CEPEJ Ethical Charter (2018) by the Council of Europe, offers five guiding principles, namely respect of fundamental rights, non-discrimination, quality and security, transparency and under user control. Yet as *Harrison v. United Kingdom* illustrates, soft norms do not suffice to provide protection in cases whereby states outsource adjudicative functions to automated or semi-automated forums that lack an effective appeal process. The ECHR restated the fact that personal and reasoned accountability is essential and that no technology could substitute the role of the judge to explain a decision.

The OECD Principles on AI (2019) also encourage responsible stewardship of trustworthy AI and require states to provide transparency, strength, and responsibility (OECD, 2019). But these guidelines are not binding and they rely on the national implementation. Lots of states have implemented policy roadmaps without establishing rights that a person can receive because of AI-informed judicial procedures. This disjunction between aspirational morality and binding law continues to generate what researchers refer to as the "delegated accountability"- a spreading out of the responsibility among developers, suppliers and judges.[175][176]

2.4.3.2 Judicial Responses and Emerging Case Law

European courts have gradually begun articulating accountability duties in AI-related contexts. In *Commission v. Hungary*, [177] the Court of Justice of the EU held that state measures undermining judicial independence violate Article 19 TEU, [178] emphasizing that independence includes freedom from external pressures including technological ones. More recently, in *Commission v. Poland*, the Court stressed that the judiciary's accountability must remain internal and deliberative, warning that external managerial or algorithmic oversight could constitute unconstitutional interference. [179]

At the national level, the French Conseil d'État in *La Quadrature du Net v Prime Minister* annulled parts of an administrative decree allowing bulk algorithmic surveillance, citing lack of adequate human oversight and judicial review. [180] Similarly, in *Bundesverwaltungsgericht (BVerwG)*, the German Federal Administrative Court said that the algorithmic decision tools,

[175] CONTINI, Francesco; ONTANU, Elena Alina; VELICOGNA, Marco (2024) (n 11)
[176] OECD (2019) (n 1)
[177] **COURT OF JUSTICE OF THE EUROPEAN UNION.** *Commission v. Hungary*. (n 76)
[178] **TREATY ON EUROPEAN UNION (TEU)** (Consolidated version 2012), Art. 19. *Official Journal of the European Union* C 326, 26 October 2012, pp. 13–46.
[179] **COURT OF JUSTICE OF THE EUROPEAN UNION.** *Commission v. Poland*. (n 90)
[180] **COUNCIL OF STATE OF FRANCE (CONSEIL D'ÉTAT).** *La Quadrature du Net v. Prime Minister*. (n 105)

which were used to assess risks when deploying visas, did not comply with proportionality since the weights of the criteria were not disclosed to the applicants. [181] These choices highlight a growing judicial consensus: there cannot be a delegation of accountability to machines or other private actors; it has to be based on human reason that can be explained and reviewed.

Beyond Europe, the Supreme Court of India in *Justice K.S. Puttaswamy v. Union of India* recognised informational privacy and algorithmic transparency as constitutional values. The Court noted that rule by black box algorithms infringes dignity and autonomy, the moral principles applied to due process in democratic societies. This type of cross-jurisdictional convergence implies that algorithmic accountability is quickly emerging as a transnational constitutional principle.

2.4.3.3 Accountability as a Substantive Due Process Requirement

Regardless of these improvements, the majority of the accountability regimes are still procedural and not substantive. They check the presence of oversight mechanisms, and not the effectiveness of maintaining fairness. The design of algorithmic decision systems alone, as scholars like Yeung and Harkens note, is part of value choices, choices that cannot be legitimised by transparency statements or certification audits alone. [182] Real responsibility means that all decisions made with the help of AI must have a human rationale behind which the responsibility to judge cannot be divided.

As a result, the normative milestones such as the EU AI Act and CEPEJ Charter are not sufficient to be considered constitutional. As a way of ensuring due process, accountability has to be beyond documentation and reconnect moral connection between judicial decision and human deliberation. Otherwise, the formal auditing of AI will conceal substantive injustice.

2.4.4 The Doctrinal Implications for Due Process

The issue of artificial intelligence and the due process in the judicial sphere reveals a paradoxical doctrinal gap. Although AI has been marketed as a source of efficiency and uniformity, its systemic aspects such as bias, obscurity and watered down accountability essentially undermine procedural and moral frameworks that nurture the rule of law. This is because due process, traditionally as a check against arbitrariness, cannot coexist with the

[181] **FEDERAL ADMINISTRATIVE COURT OF GERMANY (BUNDESVERWALTUNGSGERICHT).** Judgment of 16 December 2021 in administrative case No. 1 C 15.20. ECLI: DE:BVerwG:2021:161221U1C15.20.0
[182] YEUNG, Karen; HARKENS, Adam. (2023). (n 91)

technologies that cloud thinking, push responsibility out of sight or perpetuate inequality by using automated inference.

2.4.4.1 Reconceptualising Fairness and Reasoning in Algorithmic Adjudication

The spirit of due process is rationalisation such that decisions of courts must be visible, personal and open to examination. This theoretical commitment, which is reflected in Article 6 of the ECHR, Article 31 of the Lithuanian Constitution (1992) and the EU Charter of the Fundamental Rights (Article 47), is that the rationale is not a formality, but the source of legitimacy. The role of artificial intelligence in compromising this standard is that it introduces probabilistic rationality to arenas where normative reasoning would otherwise be used. According to Atkinson, AI never reasons, but it correlates.[183] Replacing logical reasoning with correlation of data, therefore, replaces the moral judgment with statistical analysis.

In *Beghal v. United Kingdom*, The European Court of Human Rights (2021) restated the principle of fairness to include the ability to appeal the evidential and procedural grounds of any state decision that has influence on the rights. [184] However, in AI-assisted adjudication, litigants are often forced to deal with results that they are not able to challenge. Such imbalance transforms the courtroom as the field of deliberation into the field of automated validation, which is contrary to the Lithuanian and European constitutional principle of participatory justice. [185]

2.4.4.2 Delegated Accountability and the Erosion of Judicial Independence

The other implication in the doctrine is on judicial independence. The current AI systems integrate decision-support tools into the interface of judges, build a structural dependence that blends the line between support and delegation. Judges can subconsciously defer to the output of algorithms when they are generating draft judgments or predictive analytics, which is called automation bias. The Venice Commission (2022) [186] cautioned that when allowed to run unimpeded, such technological integration will be prone to replace the act of judgment with procedural compliance. Such understanding is indicative of the change in focus of substantive

[183] ATKINSON, Katie; BENCH-CAPON, Trevor; BOLLEGALA, Danushka (2020). *Explanation in AI and law: Past, present and future. Artificial Intelligence*, 289, 103387.
[184] **EUROPEAN COURT OF HUMAN RIGHTS.** *Beghal v. United Kingdom* (n 66)
[185] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)
[186] **VENICE COMMISSION – EUROPEAN COMMISSION FOR DEMOCRACY THROUGH LAW.** (2022). *Compilation of Venice Commission opinions, reports and studies on constitutional justice (updated).* Strasbourg: Council of Europe, 7 December 2022.

justice to administrative performance, which dilutes the constitutional role of the judiciary as the protector of basic rights. [187]

In *R (Bridges) v. South Wales Police*, The English Court of Appeal in South Wales Police decided that automated facial recognition should not be used without any legal indications as doing so amounted to infringing privacy and equality rights. [188] Even though it was not a case involving a decision-making process in the court, it is a doctrinally important case: the court concluded that algorithmic opacities and the absence of human control violate the principles of proportionality, an essential due-process measure. The identical argument is relevant to judicial AI systems, where the failure to check logic or hold people responsible is detrimental to the constitutional responsiveness of courts.

2.4.4.3 Procedural Fairness versus Technological Rationality

Doctrinally, due process embodies not merely procedure but *participatory rationality*—the right of every litigant to understand, contest, and influence the reasoning that determines their fate. On the other hand, AI-mediated justice represents technological rationality: efficiency, predictive accuracy, and standardisation. [189] This change of epistemology is on the verge of substituting human equity with uniformity of algorithms. Intelligibility and reciprocity, as Fuller argued, is the basis of the morality of law; a system that hides the reasoning is against the moral foundations of law although it may be procedurally sound. [190]

In a Lithuanian approach, Article 31 of the Constitution does not only provide equality before the law but the right to a reasoned and public decision. A recommendation generated by AI which cannot be explained is not passing this constitutional test. Lithuanian researchers have contended that the personalisation of justice is necessary under the due process, which cannot be authentically provided by any predictive model. [191] In this line, it will be prudent to incorporate AI in adjudication without strict normative parameters because this may reduce the judicial process to an artificial form of algorithmic simulation.

2.4.4.4 Reaffirming Human Reasoning as the Core of Judicial Legitimacy

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[187] HENDRICKX, Victoria (2025). (n 46)

[188] **COURT OF APPEAL (ENGLAND AND WALES).** Judgment of 11 August 2020 in case *R (Bridges) v. South Wales Police* [2020] EWCA Civ 1058. ECLI: EN:EWCA:CIV:2020:1058

[189] CALO, Ryan (2017). (n 63)

[190] FULLER, Lon L. (1969). (n 75)

[191] BARYSĖ, Dovilė (2022). *People's attitudes towards technologies in courts. Laws*, 11(4), 71. Available at: https://www.mdpi.com/2075-471X/11/4/71

The accrued intellectual comprehension is obvious: procedural fairness, transparency, and accountability are unimaginable by technological means. As mentioned earlier, human oversight is recognized as a protection in the EU AI Act (2024/1689) and the CEPEJ Ethical Charter (2018), but their enforcement procedures are superficial. Accountability, however, should be moral and not administrative. Courts need to restate the fact that human rationale based on empathy, proportionality, and interpretive integrity is the only true honorable base of due process that cannot be replaced by anything.

Therefore, AI can enhance the delivery of justice; however, it cannot serve the cause of adjudication to think, reason and to be morally sound as a society. As long as explainability, mitigation of bias, and personal responsibility is not enshrined substantively, but merely procedurally, AI in judicial decision-making will remain a source of degradation, and not enhancement, of due process.

2.5 Conclusion

Artificial intelligence brought about another type of rationality in the judicial systems, but not through deliberation, but data. Although the technologies enhance administrative efficiency, their lack of transparency, bias, and poor accountability jeopardize the clarity of the procedures that due process requires. Regulatory provisions, including the EU Artificial Intelligence Act (2024/1689) and Ethical Charter of the Council of Europe (2018) are keenly aware of these risks, but again are more procedural in nature, rather than restore full judicial independence.

Justice is based on truthful human judgment and not robotic prediction. The application of AI tools will keep undermining the fairness and moral justification of adjudication until they become closed, challengeable, and well held accountable by humans. What seems to be the advancement in efficiency thus, becomes retrogression in justice.

CHAPTER THREE

3.0 INTERACTION BETWEEN ARTIFICIAL INTELLIGENCE AND DUE PROCESS – LITHUANIA'S INSTITUTIONAL READINESS

3.1 Introduction

The interaction between artificial intelligence and due process raises some very pressing concerns for legal systems navigating digital transformation. As AI promises administrative efficiency, faster case handling, and better access to legal information, its integration into judicial decision-making challenges foundational guarantees of fairness, transparency, and independence of the said systems. These risks are particularly acute in systems like Lithuania's, wherein constitutional commitments to due process—forming essential pillars of democratic legitimacy at large—including the right to a fair and public hearing, judicial independence, and reasoned adjudication, receive great importance.[192]

These obligations are reflected in international and regional human rights instruments. Hence, Article 14 of the ICCPR[193], Article 6 of the ECHR[194], and Article 47 of the CFR[195] all require proceedings to be conducted before independent and impartial tribunals, equality of arms, and that a person be in a position to know, and to challenge, the grounds of any decision taken. Guarantees that are presently increasingly stretched by AI tools operating by way of obscure correlation rather than open judicial reasoning as reported by Wachter.[196]

Building upon the conceptual foundations established in the prior chapters, this chapter explores the articulations of due process guarantees in the international, European and Lithuanian systems and then evaluates the institutional capacity of Lithuania to address the risk of AI. It reflects on whether the current measures against algorithmic influence like constitutional safeguards, judicial culture, national AI policy, and digital justice initiatives can ensure the integrity of adjudication.

Ultimately, this chapter bridges theory and institutional practice. It looks not only at how due process is defined across legal orders, but also at how effectively these guarantees can restrain the risks identified in Chapter 2 (bias, opacity, and weakened accountability). In so doing, it

[192] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*, Article 31. (26)
[193] **UNITED NATIONS.** *International Covenant on Civil and Political Rights*, 1966. (n 18)
[194] **COUNCIL OF EUROPE.** *Convention for the Protection of Human Rights and Fundamental Freedoms.*1953 (n 19)
[195] **EUROPEAN UNION.** *Charter of Fundamental Rights of the European Union*, Article 47. (n 20)
[196] WACHTER, Sandra; MITTELSTADT, Brent; RUSSELL, Chris (2021). (n 88)

asks whether Lithuania's legal and institutional structures can meaningfully preserve fairness and judicial independence in a context where algorithmic tools are increasingly shaping legal processes.

3.2 Due Process in International and European Instruments

Due process is a core guarantee throughout international and regional human rights regimes in terms of the prerequisites of fair, transparent procedures, equality of arms, and independence of the judiciary. These are instruments that provide the normative benchmark for assessing whether the introduction of AI into judicial processes enhances or diminishes fairness in judicial procedure.

3.2.1 Due Process under the ICCPR

The global standard of due process is enshrined in Article 14 of the International Covenant on Civil and Political Rights. It guarantees an effective, autonomous and fair tribunal, equality before the law and a reasoned decision (ICCPR 1966). [197]AI operating through obscure models is contrary to such guarantees, particularly when the litigants cannot intelligently interpret or appeal the decisions affected by algorithms. The UN Human Rights Committee has highlighted that due process requires procedural engagement, as well as a rational adjudication, both of which are scarcely achieved when automated risk scores or predictive analytics are used to make decisions.

3.2.2 Due Process under the European Convention on Human Rights

Article 6 of the European Convention on Human Rights (ECHR) also provides for a fair hearing, justice before the people and justice without prejudices.[198]

The ECtHR jurisprudence strengthens the fact that fairness cannot exist without the need to have proper reasoning. *For instance, in Kraska v. Switzerland*, the Court pointed out that judicial ruling had to demonstrate that parties had been heard by the court and had arguments that were weighed. [199]On the same note, in the case of *Dudgeon v the United Kingdom*, the Court emphasized that justice should not only be done, but it must be seen to be done.[200] This

[197] **UNITED NATIONS.** *International Covenant on Civil and Political Rights*, 1966. (n 18)
[198] **COUNCIL OF EUROPE.** *Convention for the Protection of Human Rights and Fundamental Freedoms.*1953 (n 19)
[199] **EUROPEAN COURT OF HUMAN RIGHTS.** *Kraska v. Switzerland* (n 22)
[200] **EUROPEAN COURT OF HUMAN RIGHTS.** *Dudgeon v. the United Kingdom* (n 23)

expectation is stretched to its limits where algorithmic tools influence judicial rulings but does not publicize the truth.

The ECtHR has frequently ruled that opacity and lack of contestability constitute a violation of Article 6. Cases such as *Hadjianastassiou v. Greece*[201] and *Ruiz Torija v. Spain*[202] confirm that courts must give reasons for decisions to an extent enabling parties to properly understand the grounds on which the decisions were reached. This requirement establishes a high threshold, which AI-assisted judgments (let alone those based on black-box models) cannot easily meet.

Article 47 of the EU Charter of Fundamental Rights enshrines the EU level right to a fair hearing and an effective remedy. The Charter calls for open and transparent judicial procedures at the Union level, while the Court of Justice of the European Union has also reiterated the right to effective judicial protection on numerous occasions.

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In Digital Rights Ireland (C-293/12), the CJEU similarly held that any interference with fundamental rights must be strictly necessary and proportionate—a test which is also relevant to algorithmic processing of judicial data. Independence as a structural component of due process was emphasized by the Court in *Commission v. Hungary*, where it warned that systemic or technological pressures can undermine judicial autonomy.[203]

Recent cases about digital surveillance also shed light on how automation intersects with due process. In La Quadrature du Net (C-511/18)[204], for example, the CJEU invalidated automated bulk data retention systems for failing to incorporate sufficient safeguards and judicial controls. While this case did not directly relate to the courts, the Court's reasoning indicates a wider principle: automated systems that bypass transparent human reasoning pose intrinsic risks to the right to a fair trial.

[201] **EUROPEAN COURT OF HUMAN RIGHTS.** *Hadjianastassiou v. Greece* (n 68)
[202] **EUROPEAN COURT OF HUMAN RIGHTS.** *Ruiz Torija v. Spain* (n 69)
[203] **COURT OF JUSTICE OF THE EUROPEAN UNION.** *Commission v. Hungary*. (n 76)
[204] **COUNCIL OF STATE OF FRANCE (CONSEIL D'ÉTAT).** *La Quadrature du Net v. Prime Minister*. (n 105)

3.3 Due Process in the Lithuanian Legal System

Due process is at the heart of Lithuania's constitutional structure, lying at the very core of both the rule of law and judicial legitimacy. Article 31 of the Constitution of the Republic of Lithuania, 1992, enshrines a right for everyone to a fair hearing by an independent and impartial tribunal in public sessions. While the constitutional guarantee reflects international standards under the ICCPR, ECHR, and CFR, Lithuanian jurisprudence has followed its own development of what constitutes a fair hearing, a reasoned judgment, and judicial independence which are all directly confronted by the development of the use of artificial intelligence in judicial administration. [205]

3.3.1 Constitutional Guarantees Under Article 29, 30 and 31

Article 29, 30 and 31 establish procedural safeguards which define the Lithuanian conception of due process: [206]

- the principle of presumption of innocence: A person shall be presumed innocent until proved guilty according to the procedure established by law and declared guilty by an effective court judgement (Article 31)

- the right to defense: a person charged with the commission of a crime shall have the right to a public and fair hearing of his case by an independent and impartial court (Article 31)

- equality before the law: All persons shall be equal before the law, the court, and other State institutions and officials (Article 29)

- the right to have one’s case heard by an independent and impartial court: The person whose constitutional rights or freedoms are violated shall have the right to apply to court (Article 30)

The Constitutional Court of Lithuania has repeatedly stated that these guarantees go beyond formal compliance with substantive fairness. Through its jurisprudence, the Court has underlined that judicial decisions should be based on clear and understandable reasoning, available to the parties it has affected. For instance, in its 2006 judgment on judicial independence, the Court pointed out that the process of adjudication must be totally free from

[205] **CONSTITUTION OF THE REPUBLIC OF LITHUANIA** (1992). *Official Gazette* (1992, No. 33-1014)
[206] Ibid

all kinds of outside influence, including any administrative or executive pressure, which can violate impartiality (Constitutional Court of Lithuania, 2006)[207]

These constitutional principles assume new relevance when viewed in the light of AI-assisted decision-making. Algorithmic tools, in particular opaque systems used for case triage, document classification, or predictive analytics, risk undermining the requirement that judicial reasoning be both transparent and personally attributable. As Jarukaitis and Švedas[208] argues, Article 31's guarantee of individualized justice is incompatible with decisions influenced by statistical patterns or probabilistic models.

3.3.2 Judicial independence and procedural fairness in Lithuanian Codes

The Code of Civil Procedure and Code of Criminal Procedure operationalise constitutional due process by structuring the rights to adversarial proceedings, equality of arms, the right to evidence, and the duty of courts to give reasoned judgments. Lithuanian courts have long maintained that the reasoning requirement is a significant element of the notion of fairness. In *Milius v. Lithuania*, for instance, the ECtHR observed that Lithuanian procedural law puts significant emphasis on the requirement to give sufficient grounds for judicial decisions, enabling the parties to understand, and if necessary, challenge the result.[209]

AI-assisted tools challenge these commitments in two ways:

1. **Opacity of reasoning:** Black-box models usually have outputs that are not easily explainable, thus making integration of algorithmic results by judges in legally reasoned judgments challenging without sacrificing transparency.
2. **Risk of undue influence:** If judicial interfaces show risk scores, recommended sentences, or predicted outcomes, the judges could-be unconsciously influenced-what automation bias is-called when control appears intact.

Lithuanian scholarship, for its part, recognizes these tensions. Jarukaitis and Švedas (2019)[210] note that the Lithuanian judiciary is based on direct human judgment: judges personally decide

[207] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*. (n 26)
[208] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)
[209] **EUROPEAN COURT OF HUMAN RIGHTS.** Judgment of 24 June 2008 in case *Milius v. Lithuania*, Application No. 14390/04. ECLI: CE: ECHR: 2008:0624JUD001439004
[210] JARUKAITIS, Irmantas; ŠVEDAS, Gintaras (2019). (n 87)

questions of fact, law, and morality which is a process incompatible with delegating interpretative powers to automated systems powered by Artificial Intelligence.

3.3.3 Lithuanian Judicial Practice and Fairness Doctrine

The Lithuanian courts have developed a doctrine of fairness that is based upon proportionality, transparency as well as human reasoning. The Supreme Court of Lithuania has made multiple decisions that justice has to be comprehensible to the parties and the society and procedural legitimacy must entail comprehensibility of reasoning. The Court, in the ruling of 2015, reiterated that the judgments must demonstrate the ways in which evidence and legal arguments made their presence felt in the conclusions made by the court and pointed out that it is reasoning which forms the foundation of the confidence of people.[211]

This doctrine raises critical concerns for the integration of AI:

- **Algorithm-assisted classification tools** may produce outputs which the Judge is unable to fully interpret or verify.
- **Predictive analytics** can normalize outcomes based on past judicial practice, undercutting individualized justice.
- **Administrative AI tools** found in e-case management indirectly influence how cases might be perceived and/or prioritized.

Given the strong doctrinal emphasis on individualized, transparent justice in Lithuania, AI mechanisms, which remain opaque, raise structural conflicts with established fairness jurisprudence. Lithuanian scholars highlight that due process under Article 31 requires not only fair results but fair reasoning—an element AI cannot currently replicate.[212]

3.4 Lithuania's Policy and Legal Developments

Lithuania has been taking purposeful steps toward integrating digital technologies into public administration, including within the justice sector. Nevertheless, Lithuania's approach to artificial intelligence remains lopsided, with ambitious policy commitments in theory but rather limited practical implementation and enduring institutional constraints in reality. The present

[211] **SUPREME COURT OF LITHUANIA.** Ruling of 15 May 2015 in case *UAB Magna Baltija v. UAB Statva*, Civil Case No. 3K-3-298-687/2015

[212] STOLPER, Ilona (2024). *Towards automated decision-making at court: The use of artificial intelligence for drafting and rendering court decisions. Teisė*, 130, pp. 153–163

subsection assesses the AI-related strategic positions taken so far by Lithuania, the reforms under way, and the challenges looming over due process in an AI-assisted judicial environment.

3.4.1 National AI Strategy (2020) and Government Policy Initiatives

In 2020, Lithuania adopted its National Artificial Intelligence Strategy, which includes long-term targets of the development of AI in the economy, in public services, and in governance. The focus of this strategy includes the modernization of the state systems, efficient utilization of data, and the improvement of the service delivery. [213]Although it talks about justice sector reform, there are no explicit operational rules regarding the use of AI in courts which are set by the Strategy such that there are no transparency standards, no explainability requirements, and no accountability mechanisms about judicial behavior.

The strategy acknowledges the promise of AI in improving efficiency, but it fails to refer to the risks discussed earlier, in particular those related to bias, lack of transparency, and undermining of judicial independence. As per the scholars, Lithuania AI Strategy is still policy-based, not rights-based. According to research, Lithuania AI Strategy remains policy-based, rather than rights-based. Scholars believe that the AI Strategy of Lithuania is still the policy-driven one, not the rights-driven one as there is no specific commitment to the constitutional guarantees of due process.[214]

3.4.2 Ministry of Justice Reforms and Digitalization of the Court System

The Lithuanian Ministry of Justice has promoted several digitalization initiatives, including:

- the **e. Teismas (e-Court)** platform for electronic filing and case management,
- digital notification tools for parties, and
- plans for integrating automated document classification and case-routing tools

The e.Teismas (e-Court)

Another focus of judicial modernization has been the e. Teismas (e-Court) platform, allowing for electronic filing, digital case registration, electronic submission of evidence, and integrated case-management functions. Peer-reviewed publications on digital justice in Lithuania stress

[213] **MINISTRY OF THE ECONOMY AND INNOVATION OF THE REPUBLIC OF LITHUANIA.** (2018). *Lithuanian Artificial Intelligence Strategy.*
[214] SALO-PÖNTINEN, Henriikka; SAARILUOMA, Pertti (2022). *Reflections on the human role in AI policy formulations: How do national AI strategies view people? Discover Artificial Intelligence*, 2(1), 3.

that e. Teismas significantly enhanced procedural efficiency by reducing delays due to paper-based procedures and enabled remote participation in the proceedings, particularly during and since the COVID-19 period.[215]

Digital Notification Tools for Parties

These systems are complemented by other digital notice and communication tools that enable parties to receive procedural notices electronically and track case progress in real time. According to research, the use of electronic notification systems has facilitated both operational continuity and much better engagement with litigants in courts in Lithuania. [216]

Plans for Integrating Automated Document Classification and Case-Routing Tools

More recently, policy research indicates that the Ministry of Justice has launched pilot projects with regard to automated document classification, triage and initial case-routing. These systems are still in their infancy when it comes to adoption, but Lithuanian legal thought has observed that its adoption in judicial processes is part of a wider European trend of using algorithms to help administrative tasks in courts and to help decrease the amount of administration required of a judge (Fabri, 2024). [217]However, critics in academia also caution that this deployment must occur without compromising constitutional rights such as the right to a fair hearing, judicial independence and safeguarding of due-process.[218]

These developments are part of a broader trend within the EU to have smart courts, although Lithuania has yet to take any action towards implementing AI in judge decision-making. The Ministry has considered automated text sorting and distribution of work but the tools are still in experimental stages and are not statutorily-based. More to the point, there is no legal mechanism that assures the impartiality and transparency of algorithmic distribution of cases or processing of documents as yet.

These developments are part of a broader trend within the EU to have smart courts, although Lithuania has yet to take any action towards implementing AI in judge decision-making[219]. The

[215] NEKROŠIUS, Vytautas; SIMAITIS, Ramūnas; VĖBRAITĖ, Vaida; BRAZDEIKIS, Audrius (2017). *Electronification of Civil Justice in Lithuania.*
[216] NATIONAL COURTS ADMINISTRATION OF THE REPUBLIC OF LITHUANIA (2024). *E-Service Portal of Lithuanian Courts – "e.teismas.lt": Public services*
[217] FABRI, Marco (2024) (n 25)
[218] PAUZAITĖ-KULVINSKIENĖ, Jurgita; STRIKAITĖ-LATUŠINSKAJA, Gabija (2025). *Regulating automation: The legal landscape of "automated administrative orders" in Lithuania. Italian Journal of Public Law*, 17, p. 663
[219] **STATE AUDIT OFFICE OF THE REPUBLIC OF LITHUANIA.** (2021). *Audit of digitalisation risks in public institutions*

Ministry has considered automated text sorting and distribution of work but the tools are still in experimental stages and are not statutorily-based. Moreover, there is no legal mechanism that assures the impartiality and transparency of algorithmic distribution of cases or processing of documents as yet.

3.4.3 Institutional Limitations, Cultural Attitudes, and Ethical Considerations

Despite policy ambitions, Lithuanian judicial institutions have a number of structural limitations that complicate full-scale AI adoption:

a) Limited technical capacity

In the vast majority of the courts, AI knowledge is not in-house and therefore they rely on external consulting providers or third parties. This poses questions about the transparency of the algorithms, responsibility of the vendors, and the regulation of the judicial data (Fabri 2024). [220]

(b) Judicial conservatism and ethical hesitations

Surveys conducted among the judiciary reveal scepticism towards automated tools, and some of the concerns raised by judges are those of losing interpretive independence, undermining public trust, and breaching the ethics rules on independence. [221]

c) Weak oversight frameworks

Currently, there are no mandatory algorithmic impact assessments, transparency demands, or human-in-the-loop requirements on the technological tools utilized by courts in the Lithuanian law. Although these requirements will shortly come into force under the EU Artificial Intelligence Act (Regulation 2024/1689), Lithuania has not yet revised the domestic law to implement the provisions of the Act regarding the concept of "high-risk" in relation to justice systems.

(d) Data governance weaknesses

[220] FABRI, Marco (2024) (n 25)
[221] **JUDICIAL COUNCIL OF THE REPUBLIC OF LITHUANIA.** (2022). *Report on digitalisation and judicial independence*

AI needs huge amounts of structured data. Lithuanian court records remain fragmented in different systems, with inconsistent metadata standards. Poor quality of data threatens to embed inaccuracies in subsequent AI tools that could be used for classification or prediction of cases.

(e) Ethical risks in public sector AI

The Lithuanian Office of the Ombudsperson for Electronic Communications has warned that opacity in automated systems threatens public rights, signaling a lack of robust ethical controls within public-sector AI deployment. In the investigation report by the Ombudsperson in 2022, such a concern equally extends to judicial automation.[222]

These limitations collectively suggest that, while modernizing the system of justice is an aspiration of Lithuania, its institutional readiness for AI most particularly those applications implicating due process remains incomplete and constitutionally fragile.

3.5 Comparative Readiness Analysis

Lithuania's institutional readiness compared to that of other jurisdictions varies significantly across elements such as regulatory maturity, technological capacity, judicial culture, and constitutional safeguards. While many states are pursuing digitalization, their approaches to judicial AI embody different levels of commitment to fairness, transparency, and judicial independence. This research presents a comparative analysis by which Lithuania is matched against selected European and non-European jurisdictions to outline valuable lessons for safeguarding due process.

3.5.1 European Union: Estonia, France, and the Netherlands

3.5.1.1 Estonia – Technological Leadership but Increasing Legal Tension

Estonia is widely regarded as the EU's most technologically advanced justice system. Its e-Court and e-File platforms integrate automated case routing, digital evidence systems, and experimental AI prototypes for small claims adjudication. [223] Preparation of Estonia in turn is based on robust digital infrastructure, civic consciousness, and high confidence in e-governance.

[222] **OMBUDSPERSON FOR ELECTRONIC COMMUNICATIONS.** (2022). *Report on automated decision systems in public administration*

[223] CANTERO GAMITO, Marta; GENTILE, Giulia (2023). *Algorithms, rule of law, and the future of justice: Implications in the Estonian justice system. EUI School of Transnational Governance, Policy Brief*.

Nevertheless, due process concerns remain:

- Automated case allocation lacks well-defined standards around explainability of decisions,
- we still depend on nontransparent models for drafting AI-generated decisions;
- appeals procedures do not yet fully account for algorithmic influence.
- Scholars note that Estonia's push for efficiency risks outpacing constitutional safeguards, especially the requirement that judicial reasoning remain human and publicly understandable.

3.5.1.2 France – Strongest Judicial Safeguards through Restrictive Regulation

France has adopted the most restrictive approach in Europe. Law No. 2019-222, Article 33[224], states clearly that judicial analytics shall not be used to predict judge behavior. This was a decision after concerns that predictive tools would distort adjudication, pressure judges, and undermine independence had arisen.[225]

France's readiness model is normative rather than technological:

- Strict limits on predictive analytics,
- Emphasis on human interpretation,
- Strong data protection controls under the GDPR and CNIL guidance
- Explicit warnings against algorithmic interference in judicial reasoning.

This reflects a constitutional identity based on the protection of *l'autorité judiciaire* and underlines how judicial independence can justify a general prohibition to use AI.

3.5.1.3 The Netherlands - High Digitalization, Strong Judicial Oversight

The Netherlands has one of the most advanced digital court systems in the EU and is simultaneously known for judicial resistance to opaque automated systems. The judgment in *NJCM v. Netherlands*, striking down an automated welfare risk-scoring system for breaching

[224] **FRENCH REPUBLIC (MINISTRY OF JUSTICE).** *Law No. 2019-222 of 23 March 2019 on the programming 2018-2022 and reform of the justice system, Article 33. Journal officiel de la République française*, 24 March 2019.
[225] HENDRICKX, Victoria (2025). (n 46)

principles of privacy, equality, and transparency, was seminal. It held that algorithmic systems need to be reviewable and contestable which are standards highly relevant to judicial AI. [226]

Dutch readiness is therefore balanced:

- high digital adoption,
- but strong judicial scrutiny,
- and insistence on explainability and proportionality.

This demonstrates that, for Lithuania, courts can act as constitutional protectors against automation without rejecting digitalization.

3.5.2 United States – High Technological Adoption, Low Due Process Protection

The US has the highest level of adoption of algorithmic tools in criminal justice, including but not limited to sentencing risk assessments such as COMPAS, pretrial algorithms, and predictive policing. However, its readiness to safeguard due process is comparatively weak.

Key issues include:

- AI use is widespread but minimally regulated,
- no federal AI legislation unique to justice systems
- due process analysis varies significantly by state.

Cases like *State v. Loomis* also allowed the continued use of opaque risk scores despite evidence of racial disparities, revealing a judicial tendency to defer to technological efficiency over fairness. [227] Further research confirms systemic racial bias in U.S. criminal risk tools, raising serious equality and transparency concerns. [228]

The U.S. experience provides a cautionary reminder of the risks of excessive AI adoption without robust constitutional protections.

[226] **DISTRICT COURT OF THE HAGUE (RECHTBANK DEN HAAG).** Judgment of 5 February 2020 in case *NJCM v. Netherlands*, Case No. C/09/550982 / HA ZA 18-388. ECLI: NL: RBDHA: 2020:1878
[227] **SUPREME COURT OF WISCONSIN.** *State v. Loomis* (n 32)
[228] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren (2022). (n 153)

3.5.3 Asia – China and Singapore as Divergent Models

3.5.3.1 China – Maximum Automation, Minimal Transparency

China has developed the most extensive integration of AI into judicial decision-making anywhere in the world. Its Smart Court System includes:

- AI-generated judgment recommendations,
- automated case categorization,
- digital evidence evaluation,
- and predictive tools embedded in judges' dashboards. [229]

However, concerns include:

- opaque algorithms,
- top-down administrative control of the judiciary,
- and limited procedural rights to challenge AI outputs

China demonstrates how AI can threaten judicial independence when used as an instrument of state management rather than legal reasoning.

3.5.3.2 Singapore – Controlled Innovation with Clear Judicial Boundaries

Singapore represents a more gradualist Asian model. It employs AI for administrative efficiency, such as the A-Cube tool for document classification and the Intelligent Case Management System, while explicitly prohibiting AI from rendering determinative judicial decisions.[230]

Judicial officers maintain full control of reasoning, demonstrating that AI outputs cannot replace human judgment. Readiness by Singapore is based on:

- clear legal boundaries,
- strong judicial professionalism,
- and rigorous ethical standards.

[229] WANG, Rong (2024). *How to strengthen trust in digital transformation of the court systems? Experience from China. Erasmus Law Review*, 17, p. 206
[230] LIM, Samuel (2021). *Judicial decision-making and explainable artificial intelligence: A reckoning from first principles. Singapore Academy of Law Journal*, 33, pp. 280–314

For Lithuania, Singapore demonstrates how controlled and well-bounded uses of AI can modernize courts without undermining due process.

Comparative Insight for Lithuania

Across the studied jurisdictions:

- Estonia shows the risks of rapid technological adoption without matching safeguards.
- France shows the protective value of limiting AI in courts.
- The Netherlands shows how judicial oversight can rein algorithmic tools.
- The U.S. illustrates risks from an unregulated high adoption.
- China epitomizes the extreme case where automation surpasses independence.
- Singapore exemplifies controlled adoption anchored in judicial values.

Lithuania, for instance, shows a high level of constitutional safeguards but low technological maturity and thus stands between France and the Netherlands. Its constitutional framework is very strong, but its practical systems are not prepared to cope with algorithmic risks without compromising on fairness and transparency.

3.6 Conclusion

This chapter has established that, while Lithuania may have a theoretically sound constitutional basis for due process, its institutional and technological preparedness is far from adequate to mitigate the risks of artificial intelligence within the courts. The ICCPR, the ECHR, the EU Charter, and other international and European instruments stipulate rigorous principles of due process, transparency and judicial impartiality, which are often not met even with the help of algorithmic tools because of their obscure character and data-based determinism.

The prevailing direction of domestic constitutional jurisprudence in Lithuania emphasizes individualized reasoning, judicial independence, and procedural transparency. Nevertheless, the national policies, such as the 2020 AI Strategy, show that there is a disconnect between their lofty promises and practical protections to guarantee the accountability of the algorithms. Current digitalization reforms make the administration more efficient but without properly responding to the need of the doctrine to provide the human reasons of the decision to be made by the court transparently.

Comparative analysis shows that states that are most protective, such as France and the Netherlands, have adopted restrictive or a critically cautious stance towards judicial AI, focusing on how due process cannot be ensured unless legal boundaries are drawn with clarity. On the other hand, the examples of jurisdictions that have adopted automation without any protection, like the United States and China, demonstrate precisely how fast the legitimacy, challenge, and judicial discretion can be weakened by algorithmic tools. A combination of these findings indicate that Lithuania is constitutionally in a good position, but at present does not have the institutional and regulatory framework required to introduce AI into its judicial procedures without undermining the fundamental due process protections. Should the introduction of AI in Lithuanian court ever be necessary, it has to be accompanied by the introduction of strong legal, ethical, and technical protections so that technological efficiency might not undermine the very principles of the concept of justice and that the application of AI could be confined to administrative functions, away from adjudication.

CHAPTER FOUR

4.0 SUMMARY OF FINDINGS, IMPLICATIONS, AND POLICY SAFEGUARDS FOR DUE PROCESS

4.1 Introduction

The analysis in the preceding chapters has demonstrated that artificial intelligence poses inherent and unavoidable risks to fairness, transparency, impartiality, and judicial independence. These risks directly threaten the core elements of due process under Lithuanian constitutional law and under international and European human rights instruments. Against this background, the central task of this final chapter is to consolidate the critical assessments made throughout the research and to articulate the implications of those findings for Lithuania's justice system.

From the standpoint of this dissertation, the position is unequivocal: **AI should not be incorporated into judicial decision-making.** Experiences drawn from other jurisdictions demonstrate that algorithmic systems frequently reproduce bias, operate opaquely, and undermine the human reasoning required for legitimate adjudication. [231] Lithuanian constitutional doctrine, particularly the emphasis on individualized justice and reasoned judicial decisions, is fundamentally incompatible with delegating or influencing judicial reasoning through automated processes.[232]

However, the accelerating pace of technological development globally raises the possibility that courts may face external pressure to adopt some form of AI within their administrative structures. This dissertation does **not** endorse such adoption. Rather, it recognises that if future circumstances make certain uses of technology practically unavoidable, such uses must be restricted to **strictly limited administrative functions** that do not involve discretion, legal interpretation, or any task capable of influencing outcomes affecting rights. Under no circumstances should AI be permitted to enter the adjudicatory sphere or to perform tasks in which bias, inequality, or differential treatment could arise.

This chapter therefore provides an integrated overview of the research conclusions, which is that artificial intelligence by its very design and working logic subverts and degrades the

[231] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren (2016). (n 153)
[232] TAMOŠIŪNIENĖ, Eglė; TEREBEIZA, Živilė; DORŽINKEVIČ, Aistė (2024). *The possibility of applying artificial intelligence in the delivery of justice by courts. Baltic Journal of Law & Politics*, 17(1), pp. 223–237

fundamental aspects of due process. Based on this conclusion, the chapter presents the constitutional, legal and institutional protection that are needed to have fairness, equality and judicial independence fully safeguarded in Lithuania. It also determines the limited and tightly restricted conditions in which technology assistance can be condoned in the future, but exclusively in the form of non-adjudicative administrative work that is procedurally devoid of discretion, interpretation and any possibility of bias. Most importantly, the chapter strengthens the fact that human judicial reasoning should be the foundation of legitimate adjudication in Lithuania.

4.2 Summary of Key Findings

The findings of this study demonstrate a consistent and unambiguous conclusion: artificial intelligence is prohibitively incompatible with the constitutional and procedural provisions that constitute due process in Lithuania. In the doctrinal analysis, comparative study, and institutional evaluation, all parts of this dissertation demonstrated that AI, through its use of probabilistic reasoning, opaque computation, and data-directed judgment, failed to measure up to the requirements of fairness, openness, unbiasedness, or judicial independence necessary of valid adjudication.

The research conducted across all chapters establishes the following core findings:

A. AI Is Fundamentally Incompatible with Due Process

1. AI systems rely on opaque, probabilistic modeling, which contradicts the requirement for transparent, reasoned judicial decisions.[233]
2. AI cannot satisfy the principles of impartiality, equality, or human reasoning required by Article 31 of the Lithuanian Constitution and international standards.[234]
3. Judicial independence is compromised when decision-making is influenced by system-generated outputs, even indirectly through automation bias.

B. Comparative Evidence Confirms Systemic Risks

[233] WACHTER, Sandra; MITTELSTADT, Brent; RUSSELL, Chris (2021). (n 88)
[234] TAMOŠIŪNIENĖ, Eglė; TEREBEIZA, Živilė; DORŽINKEVIČ, Aistė (2024). (n 229)

4. The United States demonstrates that AI technologies reinforce racial and social biases, which is fundamentally opposed to the principles of fairness inherent in due process.[235]

5. In European jurisdictions, there is caution, as there are perceived risks of obscurity, discrimination and pressures to judicial independence even in highly-technologically advanced systems.

6. China proves the highest risks of automation, such as the loss of control and the denial of human control, which proves the necessity of rigid boundaries.

C. Lithuania's Constitutional Framework Leaves No Space for AI in Adjudication

7. Lithuania's due process doctrine is human-centered, requiring personalised reasoning, contextual interpretation, and judicial accountability.

8. Any automated tool influencing judicial reasoning would violate constitutional guarantees, as Lithuanian courts explicitly require decisions to reflect a judge's personal evaluation of law and facts.

D. AI May Only Be Tolerated in Extremely Limited, Non-Adjudicatory Administrative Tasks (If Unavoidable)

9. Technology might ultimately become indispensable. This does not warrant its application, in adjudication.

10. Administrative non-judgmental tasks like organizing documents, digital filing, calendar management or simple data retrieval may be taken into account and solely, under the condition that:

    - no bias can arise,
    - no legal interpretation occurs,
    - no rights are affected,
    - no outcomes or decisions are influenced.

11. Any AI system that risks unequal treatment across groups (race, gender, socioeconomic class) must be categorically prohibited.

[235] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren. (2016). (n 153)

E. The Overarching Finding

12. AI does not promote due process under any doctrinal, empirical, comparative, or constitutional assessment conducted in this research.

13. AI distorts due process and therefore must be excluded entirely from adjudication. Its use—even in administrative contexts—should be exceptional, minimal, and tightly supervised.

4.3 Implications of the Findings for Due Process in Lithuania

The combined results of this study indicate that the integration of artificial intelligence into the process of judicial decision-making would have profoundly changed, and eventually would have compromised the doctrine and constitutional underpinnings of due process in Lithuania. The implications extend beyond mere technological disruption; they strike at the core of how justice is conceived, justified, and legitimized within the Lithuanian legal order.

First, the results affirm that AI cannot fit the structural definition of individualized justice as stipulated by the constitution. Lithuanian adjudication is built upon the judge's personal evaluation of facts, law, proportionality, and context—an evaluative process that cannot be reproduced or supported by probabilistic algorithmic outputs. Tools that rely on correlations rather than normative reasoning directly conflict with the demands of Article 31 of the Constitution, which presupposes transparent, human-anchored justification for every judicial decision.[236]

Second, the results demonstrate that AI's tendency to embed and reproduce bias poses an unacceptable risk to equality and fairness. Data from jurisdictions such as the United States indicate that algorithmic systems consistently disadvantage racial or socioeconomic communities.[237] For Lithuania—a framework dedicated to equality under the law—any technology that endangers impartial results due to concealed data patterns is incompatible with due process.

Third, the institutional examination reveals that judicial autonomy would be compromised by any form of algorithmic influence, even if judges maintain formal decision-making power. Automation bias, submission to system-derived results or dependence on categorizations would generate systemic pressure that diverts interpretive control from the judge to

[236] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*, Article 31. (26)
[237] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren. (2016). (n 153)

technological mechanisms not accountable under the constitution. This decline in independence endangers both the fairness of adjudication and public confidence in the judicial system.

Fourth, the results indicate that transparency and the right to contest a court decision would be greatly undermined through the deployment of AI in judicial settings. Lithuanian law mandates that courts provide explanations for their rulings in a way that's understandable to both the involved parties and the wider community. Yet many AI systems operate as "black boxes," producing outputs without meaningful justification. Incorporating such tools into adjudication would obstruct litigants' ability to understand or challenge the basis of decisions—directly violating constitutional and procedural guarantees.

Finally, while technological advancement might render certain types of automation practically inevitable moving forward, the results clearly indicate that authorized AI applications must be limited to administrative duties without adjudicatory elements that entail legal judgment, interpretation or decisions impacting rights. Administrative uses like organizing documents, managing schedules or performing routine tasks could alleviate workload burdens; however, they need to be rigorously regulated to prevent the emergence of indirect bias or any effect on adjudicative processes. In situations where there is potential for unfairness or flawed logic, AI should be completely prohibited.

In sum, the implications of the findings confirm that **AI and due process are fundamentally misaligned within Lithuania's constitutional, procedural, and institutional framework**. This necessitates a firm boundary around judicial reasoning and strict limitations on any technological adoption, providing the foundation for the recommendations that follow.

4.4 Policy and Legal Recommendations for the European Union

The EU AI Act classifies AI used in the administration of justice as a "high-risk" system, but it does not explicitly prohibit automated or semi-automated judicial decision-making.[238] In light of the findings of this dissertation, the EU should strengthen Article 5 of the AI Act to:

(1) Strengthen Prohibitions on AI in Judicial Decision-Making

[238] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24)

The EU AI Act classifies AI used in the administration of justice as a "high-risk" system, but it does **not** explicitly prohibit automated or semi-automated judicial decision-making. Given the findings of this dissertation, the EU should strengthen Article 5 of the AI Act to:[239]

- ban any AI system capable of influencing adjudication,
- prohibit predictive analytics directed at judicial outcomes, and
- ensure that judicial reasoning remains exclusively human.

Doing so would reinforce fairness and judicial independence, principles already central to EU law.

(2) Establish Union-Wide Standards for AI Transparency and Contestability

To protect Article 47 CFR rights, the EU should mandate:

- full technical documentation for any AI tool deployed in courts,
- meaningful contestability procedures for litigants,
- disclosure of when AI is used in any part of judicial administration,
- open auditing mechanisms to detect unfair bias.

Without these safeguards, litigants across the Union may be exposed to opaque systems that undermine procedural fairness.

(3) Harmonize Data Quality and Algorithmic Audit Requirements

Differences in data governance across Member States create unequal risks of discrimination. The EU should adopt:

- harmonized data-quality standards,
- mandatory algorithmic impact assessments for any justice-sector AI,
- regular independent audits focusing on discrimination, proportionality, and legality.

Such measures would strengthen compliance with the principles of non-discrimination and equality of arms under EU law.

[239] **Ibid**

(4) Develop EU-Level Ethical Guidelines on AI Use in Courts

The **CEPEJ Ethical Charter (2018)** provides initial soft-law guidance, but the Union should expand this by adopting comprehensive judicial AI ethics guidelines that:[240]

- reinforce human responsibility,
- prohibit tools that undermine independence,
- require explainable processes, and
- prevent administrative shortcuts that compromise fairness.

This is essential to ensure that Member States do not adopt AI technologies that jeopardise the integrity of the judiciary.

(5) Protect Judicial Independence from Technological and Private-Sector Influence

As court systems across Europe modernize, there is growing reliance on external vendors and opaque technologies. The EU should adopt safeguards to ensure that:

- judicial data is not controlled by private companies,
- AI systems used in courts are fully open to scrutiny,
- procurement rules require transparency and rights protection.

Judicial independence must include independence **from technological systems** and their developers.

(6) Promote Coordinated Oversight Across the Union

Finally, the EU should consider establishing:

- a judicial AI oversight board,
- composed of representatives from national judiciaries, EU institutions, and data-protection authorities.

Such a body would monitor AI use in Europe's courts and ensure that Member States do not introduce systems that conflict with the fundamental values of fairness and due process.

[240] **COUNCIL OF EUROPE.** *European Ethical Charter on AI in Judicial Systems*. (n 58)

4.5 Policy and Legal Recommendations for Lithuania

The findings of this study indicate that incorporating artificial intelligence into judicial decision processes conflicts with Lithuania's constitutional and procedural system. Consequently, the suggestions provided here adhere strictly to the boundaries of the Constitution of the Republic of Lithuania (1992), the rulings of the Constitutional Court and the organization of Lithuania's administration. Their purpose is not to alter or reframe doctrines but to safeguard and strengthen them amid growing technological challenges.

(1) Affirm a Constitutional Boundary: AI Must Not Participate in Adjudication

The constitutional principle of Lithuania assigns the task of adjudication to a human judge, who is required to individually assess evidence, interpret legal provisions and deliver a justified verdict. This stems directly from:[241]

- Article 31 (fair and impartial trial),
- Article 109 (independence of courts), and
- Constitutional Court doctrine requiring reasoned, individualized judicial decision-making.

Therefore, Lithuania should adopt legislation or judicial guidelines that formally recognize:

AI may not:

- interpret law,
- assess evidence,
- generate judicial reasoning,
- propose outcomes,
- classify litigants,
- or influence the judge's decision through risk scoring or predictive analytics.

(2) Establish Strict Statutory Limits on AI Use in Courts

[241] **REPUBLIC OF LITHUANIA.** *Constitution of the Republic of Lithuania*, Article 31. (26)

To align with Lithuania's legal order, Parliament should introduce legislation (amending court administration laws) stating that:

- AI is permissible only for non-discretionary administrative tasks,
- and only where such tasks have no effect on rights,
- and cannot introduce any form of bias.

Permissible administrative tasks may include:

- document sorting,
- hearing scheduling,
- anonymization of documents,
- archiving,
- translation assistance.

These functions do not conflict with judicial independence or due process because they involve no interpretation, evaluation, or decision-making.

Any tool that risks affecting the substance of a case must be prohibited.

(3) Introduce Mandatory Human Oversight Rules for All Technological Systems

Even for administrative uses, Lithuania should adopt clear rules requiring that:

- a human employee must review all outputs,
- AI tools may never operate automatically without human confirmation,
- judges must be notified whenever administrative AI is used in a case file,
- courts remain fully accountable for all outcomes, including clerical ones.

This ensures compliance with Constitutional Court doctrine that responsibility for decisions cannot be transferred to automated systems.

(4) Create a National Judicial Technology Oversight Body

Lithuania should establish a **Judicial Technology and Algorithmic Systems Oversight Council**, under the National Courts Administration, with the mandate to:

- vet any digital or AI tool proposed for court use,
- conduct legality and bias assessments,
- ensure compliance with constitutional principles,
- maintain a registry of court-approved technologies,
- publish annual reports on risks and system performance.

This body would **protect judicial independence** from technological intrusion or vendor influence.

(5) Adopt Transparency Requirements for Any Technologies Used in Courts

To protect due process, Parliament should require that:

- any AI or automated tool used in court administration must be publicly disclosed,
- courts must maintain audit logs documenting how and when such tools were used,
- litigants must be informed if administrative AI interacted with their case file,
- all algorithms must be open to inspection by the judiciary, lawyers, and independent experts.

This preserves **transparency and contestability**, both required by constitutional due process.

(6) Prohibit AI Tools That Introduce Any Risk of Bias or Inequality

Lithuania should enact a statutory ban on AI systems in courts that:

- generate risk assessments,
- produce behavioural predictions,
- classify defendants or litigants,
- or rely on datasets associated with racial, gender, ethnic, socioeconomic, or regional disparities.

This ban is consistent with Lithuanian equality principles and protects vulnerable groups from structural discrimination.

(7) Strengthen Judicial Training on Digital Competence and Automation Risks

Lithuania should enhance judicial education to include:

- training on algorithmic bias,
- digital rights and data protection,
- automation bias and cognitive influence,
- risks of overreliance on automated outputs.

Training does not mean promoting AI, it means giving judges the tools to recognise, question, and resist improper use of automation.

(8) Develop a National "Human-Centred Justice" Strategy

Finally, the Ministry of Justice and the National Courts Administration should adopt a national strategy affirming that:

- Lithuanian justice is human-centred,
- technology may support administrative efficiency but never judicial reasoning,
- due process is non-negotiable,
- the judiciary must remain insulated from technological pressures.

This would mirror the spirit of the CEPEJ Ethical Charter (2018) while remaining firmly grounded in Lithuania's constitutional identity.[242]

4.6 Areas for Future Research

Although this study demonstrates that artificial intelligence cannot be applied to the judicial decision-making process within the constitutional system of Lithuania, the overall connection between technology and justice provokes a set of significant questions that the future research ought to answer. These questions are not about whether AI must adjudicate; this study has revealed it must not, but rather investigate how legal, institutional, and social frameworks must respond to technological innovation that is continuing to transform the context of public administration and the provision of legal services.

(1) Long-Term Risks of Digitalization in Court Administration

[242] **COUNCIL OF EUROPE.** *European Ethical Charter on AI in Judicial Systems*, 2018. (n 58)

Future research ought to examine how the growth in dependence on digital infrastructure, including electronic filing, automated clerical aids and online court services, can indirectly affect judicial independence, access to justice and procedural fairness in Lithuania. Although administrative technology can seem to be neutral, digital systems can be biased in their structure or unequally accessible unless they are carefully regulated.[243]

(2) The Impact of Algorithmic Systems on Vulnerable Groups in Europe

Further studies are required on the impacts of algorithmic decision-making on industries bordering justice, like policing, social welfare, or immigration, and their impacts on minority and economically disadvantaged populations. There is evidence that algorithmic tools can recreate systemic discrimination in other jurisdiction.[244] Knowing such risks is crucial to developing Lithuanian protective measures outside the courtroom.

(3) Comparative Constitutional Approaches to Regulating Judicial Technology

As European states experiment with forms of court digitalization, scholars should investigate how constitutional courts in different jurisdictions interpret the boundaries between technology and adjudication. Comparative studies could illuminate how other states reconcile technological modernization with principles of human judicial reasoning and independence, providing valuable insights for Lithuania's future policy-making.

(4) Ethical and Institutional Frameworks for Non-Adjudicatory AI

Future studies can also focus on the kinds of ethical, administrative, and institutional precautions that should be implemented to regulate AI tools applied to clerical or non-discretionary tasks only. The efficiency of using such tools may be enhanced, but there has to be mechanisms of oversight in order to avoid automation bias, data mismanagement, and discriminatory results.

(5) Implications of the EU AI Act for National Judicial Systems

Because the EU Artificial Intelligence Act (Regulation 2024/1689)[245] will significantly influence how Member States manage AI in public institutions, further research should delve into its long-term consequences on the organization of the judiciary and administrative practice and human rights in the Union. Of particular concern is the decision of whether the Act goes a

[243] WACHTER, Sandra; MITTELSTADT, Brent; RUSSELL, Chris (2021). (n 88)
[244] ANGWIN, Julia; LARSON, Jeff; MATTU, Surya; KIRCHNER, Lauren (2016). (n 153)
[245] **EUROPEAN UNION.** *Artificial Intelligence Act*, Regulation (EU) 2024/1689. (n 24)

long enough way to safeguard due process or there are more national protections stemming to be demanded.

(6) Public Trust, Legitimacy, and Technological Change

Finally, research should investigate how the public perceives the introduction of technology in judicial settings. Even administrative AI systems may affect trust in courts if citizens believe technology undermines fairness, dignity, or human judgment. Understanding these sociological dimensions will be crucial for designing policies that preserve confidence in Lithuania's justice system.

In summary, while this dissertation establishes firm boundaries against AI in adjudication, the broader intersection of technology, constitutional rights, and judicial administration remains a rich field for continued scholarly inquiry. Future research will be essential to ensure that Lithuania's justice system remains both modern and faithful to its constitutional principles.

4.7 Conclusion

This study aimed to establish whether artificial intelligence in its various manifestations can promote or facilitate due process in the Lithuanian court system. In the entire scope of the doctrinal examination, comparative analysis, institutional evaluation and constitutional analysis, one and the same conclusion was made: AI does not correlate with the main principles of the definition of the justice of adjudication in Lithuania. On the contrary, its interference in the judicial reasoning would corrupt the constitutional requirement of neutrality, openness, equality, and the use of rational judgment by humans.

Lithuania's constitutional framework—rooted in the human-centred nature of justice, the independence of the judiciary, and the requirement that every decision be individually reasoned—places adjudication squarely in the hands of the judge. This requirement is not procedural formality; it is an expression of democratic legitimacy and public accountability. AI systems, by contrast, operate on opaque probabilistic logic, cannot interpret law or context, cannot justify their reasoning, and cannot be held constitutionally responsible. Introducing such systems into judicial decision-making would undermine the very foundations upon which trust in the courts is built.

This conclusion is supported by the comparative analyses. Jurisdictions which have tested predictive analytics or algorithmic risk assessment show how quickly automated systems are reproducing and cementing inequality, particularly in vulnerable populations. These results

squarely go against the postulates of equality and legality. The issue of transparency, contestability, and automation bias still exists even in the highly advanced European states. Such comparative observations confirm that Lithuania is right in pursuing a conservative and constitutionally based policy.

Nevertheless, this research also recognizes the practical reality of digital transformation. Technology is reshaping public administration globally, and pressures to increase efficiency in the justice sector will continue to intensify. For this reason, the dissertation identifies a narrow, constitutionally acceptable space for the use of technology: **non-adjudicatory administrative tasks** that involve no discretion, no interpretation, and no risks of unequal treatment. When confined to such clerical functions—and when coupled with strict oversight mechanisms—even limited AI use need not threaten the integrity of the judicial process. But these administrative applications must remain tightly controlled exceptions, not steps toward the automation of adjudication.

In conclusion, the reviewed empirical evidence supports the conclusion that the main roles of the judicial decision-making should be strictly human. It does not mean a denial of the technological progress but it merely reiterates the moral and constitutional foundation of justice. The courts of Lithuania do not simply apply prescriptive rules, instead, they cognize normative instructions, evaluate factual arguments, situate the evidence, think in a principled manner, and define reasoning understandable and refutable by the citizenry. These duties cannot be achieved by any algorithmic process, and neither of the innovations of the technology can replace the human judgment that substantiates the legitimacy of courts.

Based on this it can be concluded regarding this dissertation that Lithuania needs to maintain a strict constitutional demarcation: although AI can help in making the administration more efficient when used within strictly limited conditions, it should never seep into the field of adjudication. The protection of due process, equality and judicial independence requires no less. The further development of Lithuanian justice cannot ignore technology but still stay in touch with the main human value which is founded on the principles of the rule of law and dignity of every person who has to appear in the court.

CONCLUSION

This dissertation has pursued an in-depth doctrinal, comparative, and institutional investigation into whether artificial intelligence can be incorporated into judicial decision-making without violating the guarantees of due process under international, European, and Lithuanian law. By locating Lithuania within larger global and EU developments, the study revealed that while AI may bring certain administrative efficiencies, it also brings with it structural, epistemic, and constitutional risks that courts at present are not prepared or positioned to absorb or dampen. The four following conclusions distil the findings throughout all chapters and together address both the research objectives and the central research question.

1. First, the conceptual underpinnings of due process and judicial decision-making reveal a fundamental incompatibility between AI systems and the core principles that govern adjudication. The doctrinal analysis in Chapter One demonstrated that adjudication operates essentially as an interpretive, human-centred, morally accountable exercise, while AI systems operate via probabilistic inference, opaque data processing, and non-normative logic. It is these structural differences that mean AI cannot meet the demands for fairness, transparency, impartiality, or reason-giving articulated by Article 14 ICCPR, Article 6 ECHR, Article 47 CFR, and Article 31 of the Lithuanian Constitution. Further inquiry into due process history illustrated that judicial legitimacy rests not upon the accuracy of computation but upon the capacity of human judges to explain and justify decisions intelligibly. This conclusion directly addresses the first research objective by clarifying that due process is a normative framework that AI, by its nature, cannot inhabit or reproduce.

2. Second, global and European experiences with AI in courts confirm that even limited or advisory use of AI tools produces significant risks to due process. As discussed in more detail in Chapter Two, the comparative examination identified that common perils arise across jurisdictions experimenting with AI—including the United States, Brazil, China, Estonia, and France—of embedded algorithmic bias, lack of explainability, automation bias, and diminished judicial independence; these perils do not depend on whether the framing of the AI tools is supportive or substitutive. The predictive sentencing tools, risk-assessment algorithms, and AI-driven research engines disproportionately drive judicial outcomes without providing transparent, contestable reasoning. This conclusion responds to the second research objective by demonstrating that empirical lessons from other jurisdictions do not support the assumption

that AI enhances fairness; instead, they show that AI consistently undermines procedural guarantees that due process protects.

3. Third, when AI is evaluated against the substantive components of due process, it consistently fails to meet the constitutional, international, and European standards required for lawful adjudication. The Third Chapter proved that the right to a fair hearing, equality of arms, judicial independence, impartiality, as well as the right to a reasoned judgment, are structurally incompatible with AI participation in legal interpretation or evidence assessment. Artificial intelligence has no moral or constitutional responsibility, no true justifications, and no ability to ensure non-discrimination, openness, or human control to meet the individual requirements of due process. The Lithuanian framework, in particular, reinforces strong requirements of judicial independence and personal responsibility for decisions—requirements fundamentally contradicted by algorithmic influence. This conclusion addresses the third research objective by showing that AI fails not only in theory but also in constitutional practice when measured against the normative benchmarks governing Lithuanian adjudication.

4. Fourth, Lithuania is institutionally and legally unprepared to incorporate AI in court decision-making, and any further deliberation on AI should be reduced to purely administrative operations that do not interfere with the judicative rationale. Chapter Four determined that Lithuania does not possess the legislative protections, control systems, constitutional interpretations, and technological support to govern AI in a fashion that does not undermine due process. Digital reforms such as e.Teismas reveal an openness toward technological modernization, but without providing the rights-protective architecture needed for AI systems operating in rights-sensitive domains. If AI were to be deployed in decision-making within Lithuania, it would therefore risk compromising fairness, independence, and the constitutional identity of its courts. This conclusion is put in direct relation with the fourth research objective, confirming that AI can only be tolerated for clerical or administrative tasks under strict legal limitations, while the adjudication itself has to remain uniquely human.

Put together, these findings confirm the overall conclusion of the dissertation: artificial intelligence in its present form and as it will foreseeably continue developing cannot be incorporated into judicial decision-making without compromising the essential due process

guarantees. Although certain administrative functions of AI could, with caution, be explored in the future, adjudication in Lithuania and similar jurisdictions must, in its essence, remain a human, reasoned, transparent, and accountable activity.

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SUMMARY

Title: Involvement Of AI In Courts' Decision Making: Will It Trigger Due Process?

Author: Jesunifemi Joshua Aborisade

This Master's dissertation examines to what extent the integration of artificial intelligence into judicial decision-making can be compatible with due process guarantees under international, European, and Lithuanian law. The study investigates the interaction between the main elements of a fair trial (judicial independence, impartiality, equality of arms, transparency, and a reasoned judgment) with AI systems distinguished by opacity, probabilistic reasoning, and lack of accountability.

This study will be based on doctrinal, comparative, and analytical methods, referring to the ICCPR, ECHR, CFR, Lithuanian constitutional norms, EU regulatory frameworks, and international ethical instruments. Global experience with regard to AI in courts is reviewed, and some of the recurring risks identified are algorithmic bias, automation bias, and reduced contestability. The dissertation examines the legal and institutional preparedness in Lithuania, mainly dealing with constitutional safeguards, judicial culture, and ongoing reforms in digitalization.

Findings indicate that AI cannot emulate or support interpretive, contextual, and morally accountable adjudication. While such administrative uses may improve efficiency, the use of AI for any purpose that affects judicial reasoning impairs due process. Lithuania currently lacks the necessary statutory and institutional framework to ensure that transparency, human oversight, and the protection of rights are respected in the use of AI.

Based on these findings, the dissertation concludes that AI inclusion in judicial decision-making is not warranted in Lithuania. If anything, only strictly limited administrative applications might be acceptable, though purely human adjudication would better preserve fairness, independence, and legitimacy of judicial authority.