

Artificial Intelligence Governance in Arbitration: Balancing Innovation with Procedural Integrity, Ethics, Security, Transparency and Human Oversight

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Abstract

This paper critically discusses how AI can be appropriately harnessed to foster access to justice through arbitration and ADR. The paper observes that AI is being increasingly adopted to transform the landscape of arbitration and ADR. It examines the specific uses of AI in arbitration and other ADR processes. Despite its importance, the paper observes that the use of AI in arbitration and ADR raises several ethical, integrity and human rights concerns. The paper explores the key concerns with the use of AI in arbitration and ADR. In light of these concerns, the paper argues that it is imperative to ensure effective governance of AI in arbitration in order to harness its positive attributes and tackle its risks and challenges for enhanced access to justice. In pursuit of this agenda, the paper discusses how AI can be effectively, appropriately and ethically adopted and governed by balancing innovation with procedural integrity, ethics, security, transparency and human oversight for enhanced access to justice through arbitration and ADR.

1.0 Introduction

Artificial Intelligence (AI) has emerged as a powerful tool that is shaping and transforming dispute resolution and access to justice among other fields. It has been observed that AI tools and systems are transforming both private and public dispute resolution processes by automating routine tasks, analyzing evidence, predicting settlement outcomes, and helping legal teams to break through negotiation impasses¹. In addition, it has been correctly noted that AI has the ability to quickly sift through the

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¹ Judgment Day: The Rise of Artificial Intelligence in Dispute Resolution., Available at <https://csdisco.com/blog/judgment-day-the-rise-of-artificial-intelligence-in-dispute-resolution> (Accessed on 01/06/2026)

mass of complex facts and evidence to identify the key issues at the heart of each dispute thus enhancing the efficiency and speed of dispute resolution².

Due to its ability to automate legal tasks, sift through previous cases to generate legal analyses, undertake legal research, generate legal documents and communications more quickly, and predict legal outcomes, AI is transforming the sphere of dispute resolution³. It has been argued that when harnessed ethically and appropriately, AI has the capacity to enhance case management, legal research, predictive analytics and administrative support thus strengthening access to justice and the rule of law⁴. In particular, it has been observed that AI is transforming the landscape of Alternative Dispute Resolution (ADR) by enhancing efficiency, reducing costs, and ensuring accessibility⁵. Due to its transformative potential, AI can strengthen processes such as filing of pleadings, document review, legal research, case evaluation and decision-making thus strengthening access to justice through ADR⁶.

Despite its role in strengthening access to justice and dispute resolution, AI raises several risks and challenges that must be carefully navigated in order to harness its transformative potential. In particular, it has been observed that the effective use of AI in ADR involves maintaining fairness, transparency, integrity, security, human oversight and confidentiality while tackling risks and challenges including bias, errors, privacy risks and enforceability hurdles⁷.

² Kumtepe. C., 'A Brief Introduction to Blockchain Dispute Resolution.' *John Marshall Law Journal*, Volume 14, No. 2 (2021)

³ Monachino. C., 'Chat GPT: A Look into the Future (Litigation).' Available at <https://www.clemetrobar.org/?pg=CMBABlog&blAction=showEntry&blogEntry=91543#:~:text=Chat%20GPT%20and%20similar%20platforms,navigate%20the%20quickly%20changing%20environment> (Accessed on 01/06/2026)

⁴ Judiciary of Kenya., 'Judiciary to Leverage AI to Enhance Justice' Available at <https://judiciary.go.ke/judiciary-to-leverage-ai-to-enhance-justice/> (Accessed on 01/06/2026)

⁵ AI and its Role in Alternative Dispute Resolution., Available at <https://taibjeeconsultants.com/ai-and-its-role-in-alternative-dispute-resolution/> (Accessed on 01/06/2026)

⁶ Ibid

⁷ AI and its Role in Alternative Dispute Resolution., Op Cit

This paper critically discusses how AI can be appropriately harnessed to foster access to justice through arbitration and ADR. The paper observes that AI is being increasingly adopted to transform the landscape of arbitration and ADR. It examines the specific uses of AI in arbitration and other ADR processes. Despite its importance, the paper observes that the use of AI in arbitration and ADR raises several ethical, integrity and human rights concerns. The paper explores the key concerns with the use of AI in arbitration and ADR. In light of these concerns, the paper argues that it is imperative to ensure effective governance of AI in arbitration in order to harness its positive attributes and tackle its risks and challenges for enhanced access to justice. In pursuit of this agenda, the paper discusses how AI can be effectively, appropriately and ethically adopted and governed by balancing innovation with procedural integrity, ethics, security, transparency and human oversight for enhanced access to justice through arbitration and ADR.

2.0 The Role of Artificial Intelligence in Arbitration

AI innovation is revolutionizing every facet of business and life including the field of ADR and dispute resolution. For example, it has been observed that AI is increasingly shaping how ADR processes, including arbitration, mediation and negotiation, are designed and conducted⁸. The application of AI in ADR ranges from supportive tools that enhance administrative tasks to advanced models that recommend or make decisions⁹. Due to its ability to streamline case management, enhance the speed of key ADR processes, reduce costs, and facilitate informed decision-making processes, AI reinforces the fundamental attributes of ADR including fairness, efficiency, speed and cost-effectiveness¹⁰.

⁸ Abbott. R., 'Understanding the Impact of AI on the ADR Process' Available at <https://www.jamsadr.com/insight/2024/understanding-the-impact-of-ai-on-the-adr-process> (Accessed on 02/06/2026)

⁹ Ibid

¹⁰ Ibid

ADR processes including arbitration and mediation have long been hailed for offering a more accessible, efficient, expeditious and cost-effective avenue to justice in comparison to traditional court proceedings¹¹. When the positive attributes of ADR are combined with technology, ADR can be an even more powerful tool of accessing justice by reaching broader populations, reducing reliance on physical court infrastructure, saving costs, streamlining documentation, and enabling participation from any location¹². It has been observed that AI has the potential to alter and transform ADR mechanisms including negotiation, mediation, expert determination and arbitration¹³. For instance, by automating certain aspects of ADR processes, AI has the capacity to accelerate dispute resolution, encourage earlier settlements and streamline the identification of key issues in dispute¹⁴.

Technological innovation through AI therefore has the potential to transform and improve the landscape of ADR for enhanced access to justice. In particular, the transformative power of AI is being witnessed in arbitration. For example, it has been observed that AI tools and systems are supporting various arbitral processes including legal research, data analysis, text generation, collecting and organizing evidence, case analysis, transcription of hearings, and translation and interpretation of documents¹⁵. AI provides tools that can support all parties in arbitration including counsel, tribunals and arbitral institutions. For example, it has been observed that AI tools are being used by counsel to summarize voluminous documents, organize evidence, generate case analyses

¹¹ Markovich. M., 'Scaling justice: How AI and ADR are reshaping legal access' Available at <https://www.thomsonreuters.com/en-us/posts/ai-in-courts/scaling-justice-ai-adr-reshaping-legal-access/> (Accessed on 02/06/2026)

¹² Ibid

¹³ Castro. J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Available at <https://esthinktank.com/2025/05/15/regulating-ai-in-alternative-dispute-resolution/> (Accessed on 02/06/2026)

¹⁴ Ibid

¹⁵ The Chartered Institute of Arbitrators., 'Guideline on the Use of AI in Arbitration (2025)' Available at https://www.ciarb.org/media/bpndtcgu/guideline-on-the-use-of-ai-in-arbitration_updated-sept-2025.pdf (Accessed on 02/06/2026)

and assist with drafting of pleadings¹⁶. In addition, it has been observed that AI is enabling arbitrators to effectively draft procedural orders, organise evidence and prepare final awards¹⁷. AI therefore provides tools that can streamline complex and voluminous tasks and processes in arbitration therefore enabling arbitrators and counsel to focus on tasks such as assessing facts and evidence, constructing arguments and deliberating to come up with final outcomes, which require a greater amount of human judgment¹⁸. In particular, it has been observed that AI can reduce administrative burdens so that tribunals can spend more time analyzing evidence and less time sorting through it for efficient and expeditious dispute resolution¹⁹.

Despite its benefits, the adoption of AI into arbitration and ADR raises several challenges, risks and concerns. For example, it has been observed that since many arbitration cases are private, the amount of publicly available data to train AI models is limited²⁰. Consequently, AI models may struggle to generate precise and well-informed outputs, potentially reducing their effectiveness in arbitration-related tasks²¹. Further, it has been observed that potential access to private data by AI tools and its use beyond originally intended purposes raises data privacy and security risks²². Algorithmic biases in AI models can also undermine fairness, ethics and human rights²³. In addition, the

¹⁶ Yadav. S., 'Regulating Generative AI in International Arbitration: A Transnational Governance Challenge' Available at <https://www.law.georgetown.edu/ctbl/blog/regulating-generative-ai-international-arbitration-a-transnational-governance-challenge/> (Accessed on 02/02/2026)

¹⁷ When Arbitrators Use AI: LaPaglia v. Valve and the Boundaries of Adjudication., Available at <https://www.acerislaw.com/when-arbitrators-use-ai-lapaglia-v-valve-and-the-boundaries-of-adjudication/> (Accessed on 02/06/2026)

¹⁸ Nairobi Centre for International Arbitration., 'Artificial Intelligence 'AI' in International Arbitration: Machine Arbitration' Available at <https://ncia.or.ke/wp-content/uploads/2021/08/ARTIFICIAL-INTELLIGENCE-AI-IN-INTERNATIONAL-ARBITRATION.pdf> (Accessed on 02/06/2026)

¹⁹ Yadav. S., 'Regulating Generative AI in International Arbitration: A Transnational Governance Challenge' Op Cit

²⁰ Castro. J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Op Cit

²¹ Ibid

²² Ibid

²³ Shaheen. S., 'Technology in ADR: An Overview of Transformative Tools' Available at <https://www.linkedin.com/pulse/technology-adr-overview-transformative-tools-saleem-shaheen-j4j3e/> (Accessed on 02/06/2026)

opacity of AI decision-making undermines the fundamental tenets of arbitration including procedural integrity, transparency and due process²⁴. Lack of human discretion and empathy in AI models can also violate fairness, ethics and human rights when managing disputes through arbitration and ADR²⁵. Further, overreliance on AI by arbitrators on key issues such as writing awards also raises ethical and procedural integrity risks²⁶.

In light of the foregoing concerns, it is imperative to effectively govern AI in arbitration in order to harness its positive attributes and mitigate its risks and challenges for enhanced access to justice.

3.0 Balancing Innovation with Procedural Integrity, Ethics, Security, Transparency and Human Oversight

In light of its advantages coupled with risks and challenges, AI governance in arbitration is a fundamental agenda towards harnessing the transformative power of this technology for enhanced access to justice. It has been observed that the fast-evolving legal landscape surrounding the integration of AI in dispute resolution including ADR necessitates ongoing attention on how parties, counsel, tribunals and arbitral institutions interact with this technology, both now and in the future²⁷. While AI has the capacity to revamp arbitration and ADR including through reducing costs, improving speed, and enhancing efficiency, its adoption exposes a regulatory gap that demands attention from arbitral

²⁴ International Bar Association, 'Innovation in arbitration: The technological revolution in dispute resolution' Available at <https://www.ibanet.org/innovation-in-arbitration-the-technological-revolution#:~:text=Technology%20is%20revolutionizing%20arbitration%2C%20bringing%20efficiency%2C%20accessibility%2C,to%20focus%20their%20resources%20on%20substantive%20issues> (Accessed on 02/06/2026)

²⁵ Castro, J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Op Cit

²⁶ American Bar Association, 'Artificial Intelligence in Arbitration: Is There Room for AI Arbitrators? – Part I' Available at <https://www.adr.org/news-and-insights/ai-in-arbitration-is-there-room-for-ai-arbitrators/> (Accessed on 02/06/2026)

²⁷ Castro, J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Op Cit

institutions, policymakers, and the broader international legal community²⁸. Governing AI is therefore a prerequisite towards its safe, appropriate and ethical adoption in arbitration for enhanced access to justice.

In order to effectively govern AI in arbitration, it is imperative to balance innovation with procedural integrity. In particular, it has been suggested that AI should not replace the independent analysis of the facts, law, and evidence required by arbitrators²⁹. AI should therefore be embraced as a supportive tool to aid in tasks such as case management, legal research assistance, or administrative tasks in order to maintain procedural integrity in arbitration³⁰. Balancing innovation with ethics is also crucial towards effectively harnessing AI in arbitration. In particular, it has been observed that tackling algorithmic biases including through training AI models on extensive, quality, inclusive, accurate and fair data sets can ensure its safe and ethical adoption in arbitration and ADR³¹. Ensuring data privacy and security is also a fundamental approach towards sound AI governance in arbitration. In order to achieve this goal, it has been observed that AI tools should not compromise the fundamental tenet of confidentiality in arbitration particularly regarding the storage, use, and retrieval of sensitive arbitration data³². Further, it is imperative to ensure sensitive data and information is neither stored nor repurposed beyond its intended use in order to ensure security and confidentiality³³.

Balancing innovation with transparency is also a suitable approach towards sound AI governance in arbitration. In particular, it has been observed that disclosure of the use of AI tools is vital in order to ensure transparency over its use and safeguard the integrity

²⁸ Yadav. S., 'Regulating Generative AI in International Arbitration: A Transnational Governance Challenge' Op Cit

²⁹ Castro. J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Op Cit

³⁰ Ibid

³¹ The Chartered Institute of Arbitrators., 'Guideline on the Use of AI in Arbitration (2025)' Op Cit

³² Castro. J., 'Regulating AI in Alternative Dispute Resolution – Challenges, risks and the EU AI Act' Op Cit

³³ Ibid

of the arbitration process and/or the validity and enforceability of the award³⁴. In order to ensure transparency, it has been suggested that when arbitrators use AI tools for key processes such as drafting awards, they should disclose this to the parties and, potentially, seek their prior approval³⁵. This provides an opportunity for parties to understand the rationale for the use of AI including the manner and context in which AI has been used or is to be used thus giving them an opportunity to accept and challenge outcomes³⁶.

Human oversight is also a cardinal requirement for the effective governance of AI in arbitration. Human oversight ensures that the use of AI in arbitration is ethical, safe, unbiased and in accordance with human rights³⁷. Through human oversight, it is possible to detect and address risks such as algorithmic biases, errors, discrimination and human right violations thus ensuring that the integration of AI in arbitration and dispute resolution upholds justice, fairness, human rights and non-discrimination³⁸. Adopting human oversight including through regular audits of AI tools and measures for review and appeal of AI decision-making is vital its safe and ethical adoption³⁹.

4.0 Conclusion

Technological innovation through AI provides immense opportunities to strengthen access to justice through arbitration and ADR. However, in light of its risks and challenges, effective and appropriate AI governance in arbitration is a fundamental agenda towards harnessing the transformative power of this technology. Achieving this

³⁴ The Chartered Institute of Arbitrators., 'Guideline on the Use of AI in Arbitration (2025)' Op Cit

³⁵ When Arbitrators Use AI: LaPaglia v. Valve and the Boundaries of Adjudication., Op Cit

³⁶ Ibid

³⁷ Castro, J., 'Regulating AI in Alternative Dispute Resolution - Challenges, risks and the EU AI Act' Op Cit

³⁸ The crucial role of humans in AI oversight., Available at <https://www.cornerstoneondemand.com/resources/article/the-crucial-role-of-humans-in-ai-oversight/> (Accessed on 02/06/2026)

³⁹ Global Arbitration Review., 'Artificial intelligence in arbitration: evidentiary issues and prospects' Available at <https://globalarbitrationreview.com/guide/the-guide-evidence-in-international-arbitration/3rd-edition/article/artificial-intelligence-in-arbitration-evidentiary-issues-and-prospects> (Accessed on 02/06/2026)

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goal involves balancing innovation with procedural integrity, ethics, security, transparency, and human oversight.

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