The Role of Artificial Intelligence in Enhancing Legal Services Delivery in Nigeria: Challenges, Opportunities, and Future Prospects

By

Oluwatosin Oluwole Akanle*

Abstract:
This article explores the transformative potential of Artificial Intelligence (AI) in revolutionising the delivery of legal services in Nigeria. It begins by examining the current state of the Nigerian legal system, highlighting the inefficiencies, accessibility issues, and high costs that plague the sector. The study then explores how AI technologies, including machine learning, natural language processing, and predictive analytics, can address these challenges. By analysing various applications of AI in legal practice, such as legal research, document review, and case outcome prediction, the article provides a comprehensive overview of the opportunities AI presents for enhancing efficiency, accuracy, and accessibility in legal services.

Furthermore, the article identifies potential barriers to the implementation of AI in Nigeria, including technological infrastructure limitations, data privacy concerns, and the need for regulatory frameworks. It offers strategic recommendations for overcoming these barriers, such as investing in technological infrastructure, developing AI-specific regulations, and fostering collaboration between tech companies and legal institutions. By combining global trends with the local context, this research contributes to the discourse on legal innovation in developing nations. It provides a framework for policymakers and legal practitioners to harness AI for enhanced legal services in Nigeria.
Ultimately, this study aims to provide practical insights for stakeholders in the Nigerian legal sector, emphasising the importance of a thoughtful and strategic approach to AI integration. By doing so, it seeks to pave the way for a more efficient, accessible, and equitable legal system in Nigeria.

Keywords: Artificial Intelligence, Legal Services, Nigeria, Machine Learning, Natural Language Processing, Predictive Analytics.

I. Introduction

The Nigerian legal system, a complex amalgamation of federal, state, and local government legislation, received English common law, various local customary law, and Sharia law, faces numerous challenges in delivering efficient and accessible legal services to its populace as of 2019 of over 200 million[1]. As the most populous nation in Africa with a rapidly growing economy, Nigeria's legal sector plays a crucial role in maintaining social order, facilitating economic transactions, and upholding the rule of law. However, the current mode of legal service delivery is plagued by issues of inefficiency, inaccessibility, and high costs, which hinder the effective administration of justice[2].

In recent years, Artificial Intelligence (AI) has emerged as a transformative force across various sectors, including law. AI technologies, encompassing machine learning, natural language processing, and predictive analytics, offer promising solutions to many of the challenges faced by

* LL.B., BL, LLM, Lecturer, Bola Ajibola College of Law, Crescent University, Abeokuta, Ogun State Nigeria. tosinakanle@gmail.com, 08037946737

[1] United Nations, *World Population Prospects 2019: Data Booklet* (UN 2019) <https://www.un-ilibrary.org/content/books/9789210042475> accessed 1 July 2024.

[2] William H Neukom, 'The World Justice Project' (2009) 9 Leadership and Management in Engineering 129 <https://ascelibrary.org/doi/10.1061/%28ASCE%291532-6748%282009%299%3A3%28129%29> accessed 1 July 2024.

legal systems worldwide[3]. This article theorises that the strategic integration of AI into Nigeria's legal services can significantly enhance efficiency, accessibility, and overall quality of legal service delivery.

The Nigerian legal system, rooted in its colonial past and subsequent constitutional developments, operates within a federal structure comprising federal, state, and local government levels[4]. Despite reforms and modernisation efforts, the system grapples with a backlog of cases, limited access to legal information, and resource constraints. These challenges present an opportunity for technological intervention, particularly through AI, to revolutionise legal practice and service delivery in Nigeria.

This study aims to analyse the potential applications of AI in the Nigerian legal context, examine the challenges and opportunities presented by such integration, and provide recommendations for effective implementation. By doing so, it seeks to contribute to the growing body of literature on legal innovation in developing countries and offer practical insights for stakeholders in the Nigerian legal sector.

2. Current State of Legal Services in Nigeria

A. *Traditional Methods of Service Delivery*

The delivery of legal services in Nigeria predominantly adheres to traditional methods that have remained largely unchanged for decades. These include face-to-face consultations, manual document preparation, and physical court appearances[5]. Legal research is often conducted using printed law reports and statutes, although there has been a gradual shift towards digital resources in recent years with the adoption of electronic law reports such as Law Companion[6], LawPavilion[7], Learned Library[8], LegalPedia[9], Lawbreed[10], and NWLR Online[11].

There are approximately 200,000 lawyers in Nigeria. The Nigerian Bar Association (NBA) plays a significant role in regulating legal practice and service delivery. However, the concentration of lawyers in urban areas, particularly Lagos, Abuja, and Port Harcourt, has led to an uneven distribution of legal services across the country.

B. *Accessibility Issues*

Access to justice remains a significant challenge in Nigeria. A 2020 study by the World Justice Project ranked Nigeria 108th out of 128 countries in terms of access to civil justice[12]. This poor ranking can be attributed to several factors. Geographic barriers present a formidable obstacle to equitable access to justice in Nigeria. Legal services are heavily concentrated in urban centers, resulting in rural communities remaining underserved[13]. This urban-centric distribution means individuals in remote areas often face long travel times and heightened costs simply to reach a courthouse or consult with a lawyer, further compounding inequality.

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[3] Richard E Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press 2013).
[4] The Constitution of the Federal Republic of Nigeria 1999 (as amended).
[5] Oluyemisi Bamgbose, 'Access to Justice through Clinical Legal Education: A Way Forward for Good Governance and Development' (2015) 15 African Human Rights Law Journal 378 <http://ref.scielo.org/7cjrqx> accessed 1 July 2024.
[6] Law Companion, 'Home' https://lawcompanion.ng accessed 14 August 2025
[7] LawPavilion, 'Home' (Lagos) https://lawpavilion.com accessed 14 August 2025
[8] Learned Library, 'Home' https://learnedlibrary.com accessed 14 August 2025
[9] Legalpedia Nigeria Limited, 'About Us' (Ikeja, Lagos) https://legalpediaonline.com/about-us/ accessed 14 August 2025
[10] Lawbreed, 'Home' https://lawbreed.com accessed 14 August 2025
[11] NWLR, 'Online Platform' https://www.nwlr.com.ng accessed 14 August 2025
[12] Neukom (n 2).
[13] Bamgbose (n 5).

Moreover, financial constraints worsen the inaccessibility of legal services for a significant portion of the population[14]. With roughly 40% of Nigerians living below the poverty line, the prohibitively high cost of legal fees puts professional representation beyond reach for many[15]. The lack of affordable options inevitably leads to a situation where justice is accessible primarily to those with sufficient financial means.

Transitioning to the structural dimensions, the complexity of the Nigerian legal system imposes another layer of difficulty. The coexistence of diverse forms of law—local legislation, common law, customary law, and Sharia law—creates a legal landscape that is bewildering for laypersons. Navigating such an environment without professional guidance often proves impossible, leaving many at risk of not receiving fair treatment or due process.
Finally, the shortage of legal aid exacerbates these challenges. While the Legal Aid Council of Nigeria has made commendable efforts to expand pro bono services, the demand for such support vastly exceeds supply. Consequently, many vulnerable individuals remain without adequate representation, perpetuating the cycle of limited access to justice.

C. *Efficiency and Cost Concerns*

The Nigerian legal system is plagued by inefficiencies that contribute to delays and increased costs. Case backlog in the Nigerian courts stands as a foremost concern. As of 2021, more than 150,000 cases were pending, with some litigation dragging out for a decade or even longer[16]. This situation results in justice being delayed and, in many cases, denied, undermining public confidence in the legal system and imposing undue hardship on individuals awaiting resolution. Compounding these delays, manual processes remain prevalent across the judicial landscape. The continued reliance on paper-based records and manual preparation of documents significantly slows legal procedures. Furthermore, these antiquated methods increase the likelihood of clerical errors, which can derail the progress of cases and generate additional costs through repeated filings or corrections.

Transitioning to technological aspects, limited adoption of digital solutions further hampers efficiency. Although a handful of courts have implemented digital case management systems, most of the sector remains technology-averse. This slow pace of digital transformation means that the potential benefits of streamlined workflows and timely case updates are not being realized widely, leaving the system mired in inefficiency.

Finally, high operational costs are a persistent issue driven by the need for extensive physical infrastructure and labour to support manual operations[17]. These expenditures inflate the cost of legal services, restricting access to justice for those with fewer resources and perpetuating an imbalance in the legal landscape. Collectively, these inefficiencies highlight the urgency for innovative reforms. The integration of AI technologies presents a compelling opportunity to overhaul traditional legal service delivery, offering the potential to address delays, reduce costs, and enhance overall efficiency in Nigeria's legal sector.

3. Artificial Intelligence in Law: An Overview

A. *Definition and types of AI relevant to legal services*

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[14] World Bank Group, 'Poverty & Equity Brief: Africa Western & Central - Nigeria' (April 2021) <https://databankfiles.worldbank.org/public/ddpext_download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/AM2020/Global_POVEQ_NGA.pdf> accessed 1 July 2024.
[15] National Bureau of Statistics, Poverty, and Inequality in Nigeria (2019) https://www.nigerianstat.gov.ng/elibrary/read/1092 accessed 17 August 2025
[16] Gavel, High Court Rankings 2021 (2021) https://files.gavel.ng/Uploads/Publications/High-Court-Rankings-2021-Latest-Version-1-.pdf accessed 17 August 2025
[17] World Bank, *Doing Business 2020: Comparing Business Regulation in 190 Economies* (Washington, DC: World Bank 2020) <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/688761571934946384> accessed 1 July 2024.

Artificial Intelligence (AI) refers to computer systems capable of performing tasks that typically require human intelligence[18]. In the legal context, AI encompasses various technologies that can assist or automate legal processes. Machine Learning (ML) holds transformative potential for legal practice. By analysing large datasets, ML algorithms can efficiently classify documents, predict case outcomes, and conduct contract analysis[19]. Such applications enable lawyers and courts to make data-driven decisions, streamline case management, and identify patterns that may otherwise go unnoticed, ultimately improving speed and accuracy in legal processes.

Equally important is Natural Language Processing (NLP), which enables computers to comprehend and generate human language. In the legal sector, NLP facilitates advanced legal research, rapid document summarization, and powers chatbots that can provide essential legal advice[20]. These tools help legal professionals process vast volumes of information swiftly, increase productivity, and expand access to legal information for clients through digital interfaces. Transitioning to rule-based approaches, Expert Systems mimic the reasoning of legal professionals. By encoding the logic and regulatory requirements, these AI solutions can assist with legal reasoning and compliance checking[21]. Automating complex decision-making tasks allows law firms and corporations to navigate regulatory environments more reliably and ensure consistent application of legal standards.

Finally, Robotic Process Automation (RPA) provides a practical solution for automating routine, repetitive tasks within legal operations[22]. By delegating administrative duties to programmable software robots, law firms reduce errors, cut operational costs, and free personnel to focus on more complex, value-added activities. This shift improves workflow efficiency and drives modernization in legal service delivery.

B. *Global trends in AI adoption for legal purposes*

The adoption of AI in legal services has been gaining momentum globally, with developed countries leading the way. Legal research enhancement has been dramatically advanced through AI-powered platforms, which allow lawyers to uncover relevant cases and statutes more efficiently[23]. By minimizing manual search, these tools not only accelerate the research process but also help legal professionals maintain accuracy and expand the scope of their findings, allowing them to build stronger arguments while reducing research costs.

Transitioning to contract review and analysis, technologies like Kira Systems and Luminance are fundamentally redefining due diligence workflows[24]. AI can rapidly analyse large volumes of contracts for risks, obligations, and key clauses, significantly cutting down the time required for

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[18] Stuart J Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Fourth edition, Pearson 2021) <https://dl.ebooksworld.ir/books/Artificial.Intelligence.A.Modern.Approach.4th.Edition.Peter.Norvig.%20Stuart.Russell.Pearson.9780134610993.EBooksWorld.ir.pdf> accessed 2 July 2024.

[19] Harry Surden, 'Machine Learning and Law' (2014) 89 Washington Law Review <https://digitalcommons.law.uw.edu/wlr/vol89/iss1/5?utm_source=digitalcommons.law.uw.edu%2Fwlr%2Fvol89%2Fiss1%2F5&utm_medium=PDF&utm_campaign=PDFCoverPages> accessed 2 July 2024.

[20] Daniel Martin Katz, 'Quantitative Legal Prediction – Or – How I Learned To Stop Worrying And Start Preparing For The Data-Driven Future of the Legal Services Industry' (2013) 62 Emory Law Journal 909 <https://scholarlycommons.law.emory.edu/elj/vol62/iss4/6> accessed 2 July 2024.

[21] Kevin D Ashley, *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age* (6th printing, Cambridge University Press 2019).

[22] Deloitte, 'Legal Department of the Future: How Disruptive Trends Are Creating a New Business Model for in-House Legal' <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/finance/us-advisory-legal-department-of-the-future.pdf> accessed 3 July 2024.

[23] Benjamin Alarie, Anthony Niblett and Albert Yoon, 'How Artificial Intelligence Will Affect the Practice of Law' [2017] SSRN Electronic Journal <https://www.ssrn.com/abstract=3066816> accessed 1 July 2024.

[24] Dana Remus and Frank S Levy, 'Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law' [2015] SSRN Electronic Journal <http://www.ssrn.com/abstract=2701092> accessed 1 July 2024.

reviews. This not only helps law firms and corporate legal departments expedite transactions but also improves risk management and consistency in contract interpretation. When considering strategic litigation planning, predictive analytics are becoming increasingly valuable. Solutions such as Lex Machina and Premonition utilize AI to scrutinize historical case data, offering lawyers insights into likely outcomes based on precedent and judge behaviour. By enabling more precise forecasting, these tools support the development of effective strategies and facilitate improved client counselling[25].

E-discovery processes have also benefited from AI integration. Tools like Relativity and Everlaw automate the extraction and organization of information from massive electronic datasets gathered for litigation or investigations[26]. This capability not only saves time but vastly improves the accuracy and thoroughness of document review, which is critical for successful case preparation in complex matters.

Finally, the proliferation of chatbots and virtual legal assistants is expanding access to basic legal information and initial case screening. Law firms and legal aid organizations increasingly deploy these AI-driven tools to respond to routine inquiries and triage client needs, freeing up human lawyers to focus on more complex tasks[27]. This democratizes legal knowledge, boosts efficiency, and broadens service reach to otherwise underserved populations.

C. Potential benefits for the legal sector

The integration of AI in legal services offers numerous potential benefits. AI integration in legal practice substantially increases efficiency by automating routine, repetitive tasks. This shift allows legal professionals to devote more time to complex work that requires nuanced judgment and expertise. Notably, studies indicate AI could automate up to 23% of a lawyer's duties, which speaks to its significant transformative potential in workflow management[28].

Moving to accuracy, AI systems are adept at processing large volumes of data with consistent precision. Since they operate with a lower error rate than humans, they help minimize mistakes in tasks like document review and legal research[29]. This improved accuracy is integral in maintaining high standards and reliability in legal analysis, ensuring clients receive sound legal guidance.

Cost reduction is another benefit closely linked to automation. By handling time-intensive activities automatically, AI can lower operational expenses for law firms. Consequently, the affordability of legal services may improve, broadening access for those who previously found costs prohibitive[30]. This economic advantage is particularly relevant in markets where legal support is often considered out of reach.

Furthermore, AI-powered analytics have a direct impact on decision-making. By supplying lawyers with data-driven insights, these technologies enable the formation of more robust legal strategies

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[25] Nikolaos Aletras and others, 'Predicting Judicial Decisions of the European Court of Human Rights: A Natural Language Processing Perspective' (2016) 2 PeerJ Computer Science e93 <https://peerj.com/articles/cs-93> accessed 17 February 2024.

[26] Maura R Grossman and Gordon V Cormack, 'Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review' (2011) 17 Richmond Journal of Law and Technology <https://scholarship.richmond.edu/jolt/vol17/iss3/5?utm_source=scholarship.richmond.edu%2Fjolt%2Fvol17%2Fiss3%2F5&utm_medium=PDF&utm_campaign=PDFCoverPages> accessed 17 February 2024.

[27] Judith Bennett and others, 'Current State of Automated Legal Advice Tools. Networked Society Institute Working Paper' <http://rgdoi.net/10.13140/RG.2.2.17230.51520> accessed 3 July 2024.

[28] 'A Future That Works: Automation, Employment, and Productivity | McKinsey' <https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works/de-DE> accessed 1 July 2024.

[29] Remus and Levy (n 22).

[30] Susskind (n 3).

and nuanced risk assessments[31]. This enhancement supports a more strategic approach to case management, with decisions anchored in comprehensive and objective information.

Finally, the introduction of AI-driven legal guidance tools and chatbots has begun to democratize access to justice. By providing basic legal information to individuals who cannot easily afford professional representation, AI platforms are helping bridge the gap between legal need and legal service availability[32]. Thus, they play a crucial role in reducing systemic barriers to justice and expanding coverage, especially in underserved communities. As these global trends and potential benefits illustrate, AI has the capacity to transform legal service delivery significantly. However, the adoption and impact of AI in legal services vary across jurisdictions, influenced by factors such as technological infrastructure, regulatory frameworks, and the readiness of legal professionals to embrace new technologies[33].

In the context of Nigeria, understanding these global trends and potential benefits is crucial for identifying opportunities to leverage AI in addressing the challenges faced by the country's legal system. The next section will explore specific applications of AI that could enhance legal service delivery in Nigeria.

4. Applications of AI in Nigerian Legal Services

A. *Legal research and analysis*

The integration of AI in legal research and analysis could significantly enhance the efficiency and accuracy of legal work in Nigeria. Currently, Nigerian lawyers often rely on manual searches through physical law reports and statutes, which is time-consuming and may lead to overlooked precedents. AI-powered legal research tools could offer several benefits:

AI introduces a significant advantage in comprehensive case law analysis, especially within Nigeria's complex legal environment. By leveraging its ability to rapidly scan and process vast databases, AI can identify pertinent precedents and legal principles with remarkable efficiency. This capability stands in sharp contrast to manual research, where time constraints and the sheer volume of information may result in missed precedents or overlooked details, thereby facilitating better-informed legal arguments[34].

Equally important is the role of multilingual processing in Nigeria’s legal sector. Given the country's rich linguistic diversity, AI systems equipped with advanced natural language processing can bridge gaps across different languages and dialects. This not only enhances the inclusivity of legal research but also allows more citizens to access essential legal information in their native tongues, strengthening the reach and effectiveness of legal services.

Moreover, predictive analytics represent a promising development for Nigerian law practitioners. By examining historical case patterns and judicial decisions, AI can forecast probable outcomes, offering valuable strategic guidance to lawyers. These data-driven predictions empower practitioners to craft arguments and decide on litigation strategies with greater confidence, potentially improving success rates and delivering more consistent results in Nigerian courts[35].

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[31] Daniel Martin Katz, Michael J Bommarito and Josh Blackman, ‘A General Approach for Predicting the Behavior of the Supreme Court of the United States’ (2017) 12 PLOS ONE e0174698 <https://dx.plos.org/10.1371/journal.pone.0174698> accessed 2 July 2024.

[32] Rostain, T., Skalbeck, R. & Mulcahy, K. G. (2013). “Thinking Like a Lawyer, Designing Like an Architect: Preparing Students for the 21st Century Practice.” Chicago-Kent Law Review, 88(3), 743. https://scholarship.kentlaw.iit.edu/cklawreview/vol88/iss3/5 accessed 1 July 2024.

[33] Markus Hartung, Micha-Manuel Bues and Gernot Halbleib, *Legal Tech: How Technology Is Changing the Legal World a Practitioner’s Guide* (C H Beck Hart publishing Nomos 2018).

[34] Ashley (n 19).

[35] Katz (n 18).

Implementation of such tools would require digitisation of Nigerian legal resources and development of AI models trained on Nigerian law. While this presents challenges, it also offers opportunities for local legal tech startups to develop solutions tailored to the Nigerian legal context.

B. Document review and contract analysis

AI-powered document review and contract analysis tools could address significant inefficiencies in Nigerian legal practice. AI stands to transform the due diligence process in Nigerian corporate transactions, bringing remarkable speed and efficiency. By rapidly reviewing extensive volumes of contracts and documents, AI can highlight key clauses, flag potential risks, and detect inconsistencies far more quickly than manual review[36]. This acceleration not only shortens transaction timelines but also enhances the accuracy of identifying critical information, helping organizations make more informed decisions.

Transitioning to contract standardisation, AI can play a pivotal role in developing and analysing standard form contracts for Nigerian businesses. By promoting uniformity and clarity in contract terms, AI-assisted drafting helps reduce the likelihood of disputes arising from ambiguous language or inconsistent provisions. The implementation of standardized contracts simplifies negotiations and enhances predictability, thereby contributing to a more stable business environment. Moreover, AI-powered compliance checking offers significant benefits in managing legal risk. AI systems trained on Nigerian laws and regulations can automatically scrutinize contracts and related documents for compliance, minimizing the possibility of legal oversights[37]. This technology-driven approach to compliance ensures that organizations consistently adhere to relevant legal standards, reducing exposure to costly penalties or litigation.

The adoption of such tools could significantly reduce the time and cost associated with document review tasks, allowing Nigerian lawyers to focus on higher-value analytical work[38].

C. Predictive analytics for case outcomes

Predictive analytics in the Nigerian legal context could provide valuable insights for both lawyers and clients. AI-powered case outcome prediction offers a compelling advantage for Nigerian legal practitioners. By analysing extensive historical case data, AI models can forecast the likelihood of success for various types of litigation. This predictive capability allows lawyers and clients to weigh their options more objectively, refining litigation strategies and potentially conserving resources by avoiding cases with low probabilities of success[39].

Furthermore, the application of judicial analytics can deepen strategic planning. AI systems that analyse patterns in judges' rulings and court decisions provide valuable intelligence about how specific issues are typically addressed. With this knowledge, lawyers can personalize their arguments and submissions to align with the preferences or tendencies of particular judges or courts, thereby improving their prospects in the courtroom[40].

Additionally, AI-supported settlement valuation can be transformative for civil litigation. By drawing from historical settlement outcomes, AI can estimate potential values for new cases. This data-driven approach enables parties to approach negotiations with a clearer understanding of probable financial outcomes, leading to more effective and realistic settlement discussions. However, the development of effective predictive analytics tools for the Nigerian legal system

[36] Remus and Levy (n 22).
[37] Surden (n 17).
[38] Alarie, Niblett and Yoon (n 21).
[39] Aletras and others (n 23).
[40] Daniel L Chen, 'Machine Learning and the Rule of Law' in Michael A Livermore and Daniel N Rockmore (eds), *Law as Data: Computation, Text, and the Future of Legal Analysis* (Paperback, SFI Press 2019) <https://www.sfipress.org/machine-learning-and-the-rule-of-law> accessed 2 July 2024.

would require significant investment in data collection and cleaning, as well as careful consideration of potential biases in historical data[41].

D. Chatbots for client interactions and basic legal advice

AI-powered chatbots could play a crucial role in improving access to legal information in Nigeria. The use of chatbots for legal information dissemination holds significant promise in bridging the knowledge gap among Nigerian citizens. By offering basic legal guidance and explanations, these AI systems help individuals understand their rights and available remedies, thereby empowering more people to seek justice when facing legal challenges[42]. In addition, client intake and triage become more streamlined through chatbot deployment in law firms and legal aid organizations. These virtual assistants can manage initial inquiries, gather essential case details, and efficiently route clients to suitable resources or professionals[43]. This not only improves operational efficiency but also ensures that clients receive timely and relevant assistance, enhancing overall delivery service.

Moreover, language support through multilingual chatbots is particularly beneficial in Nigeria's linguistically diverse environment. These systems help overcome language barriers, making legal information accessible to speakers of various local dialects and expanding inclusion for communities that might otherwise be excluded from traditional legal channels.

Finally, the 24/7 availability of chatbots transforms access to legal assistance. Offering round-the-clock guidance addresses limitations faced by individuals with busy schedules or restricted access during conventional business hours[44]. This continuous availability ensures that more Nigerians can obtain vital information whenever they need it, fostering greater access to justice and support. While chatbots cannot replace human lawyers, they could significantly extend the reach of legal services in Nigeria, particularly for underserved populations. The implementation of these AI applications in Nigerian legal services presents both opportunities and challenges. While they have the potential to enhance efficiency and access to justice greatly, their successful integration will require addressing issues such as data availability, technological infrastructure, and regulatory frameworks. The following section will explore these challenges and opportunities in greater detail.

5. Challenges and Opportunities

A. Technological infrastructure limitations

The implementation of AI in Nigerian legal services faces significant challenges due to technological infrastructure limitations. Internet connectivity remains a significant barrier to widespread adoption of AI-powered legal tools in Nigeria. While national penetration rates are close to 50%, urban-rural disparities mean that large portions of the population—particularly in rural communities—may not have reliable access. This digital divide risks excluding those who could benefit most from affordable, tech-enabled legal support.

Compounding this challenge is Nigeria's inconsistent power supply. Frequent electricity outages can disrupt the continuous operation of AI systems and their underlying infrastructure. As a result, organizations may struggle to maintain dependable, uninterrupted service, diminishing the reliability and effectiveness of AI-driven legal solutions. Hardware limitations present another

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[41] Sandra G Mayson, 'Bias In, Bias Out' (2019) 128 *Yale Law Journal* 2218 <https://www.yalelawjournal.org/article/bias-in-bias-out>

[42] Bennett and others (n 25).

[43] Rostain, Skalbeck and Mulcahy (n 30).

[44] Richard E Susskind, *Online Courts, and the Future of Justice* (First edition, Oxford University Press 2019).

obstacle. Many Nigerian legal professionals and institutions may lack the high-performance computing resources required to deploy advanced AI applications[45]. Without access to sufficient processing power, the adoption of cutting-edge AI systems in the legal sector is likely to remain confined to well-funded organizations, further deepening inequality in access.

Finally, the scarcity of local data centres adds another layer of complexity. Without robust local hosting options, AI systems may suffer from reduced performance due to latency and bandwidth issues. Additionally, reliance on foreign data centres can raise concerns around data sovereignty and the protection of sensitive legal information, complicating compliance with local regulations and undermining trust in technology-driven solutions.

Despite these challenges, there are opportunities for improvement. Prioritizing mobile-first solutions is crucial for expanding access to AI legal tools in Nigeria. With mobile phone penetration rates significantly outpacing fixed internet access, optimizing these technologies for mobile devices can reach a broader demographic, including users in regions where desktop or broadband connectivity is limited[46]. This approach directly addresses existing digital divides and maximizes engagement through widely available mobile platforms.

Building on this, leveraging cloud computing presents a strategic method for overcoming hardware limitations that constrain many legal professionals and organizations. Cloud-based solutions allow for scalable deployment of AI applications without the need for expensive, local computing infrastructure[47]. This facilitates broader adoption and enables legal institutions to utilize powerful AI services with flexible resource allocation and lower entry barriers.

Moreover, fostering public-private partnerships is instrumental in driving the expansion of necessary technological infrastructure. By collaborating, government and private entities can pool resources, expertise, and funding to accelerate advancements[48]. Such partnerships have the potential to streamline regulatory processes, stimulate innovation, and ensure that AI-driven legal solutions are aligned with local needs and standards, ultimately strengthening Nigeria's digital legal landscape.

B. ***Data privacy and security concerns***

The use of AI in legal services raises important data privacy and security concerns. Nigeria's recent Data Protection Act (NDPA) introduces essential standards for data handling, yet its successful implementation in the rapidly evolving domain of AI systems demands close attention[49]. AI legal tools process vast amounts of sensitive personal and legal data, making strict compliance with NDPA requirements vital. Without careful regulation and ongoing oversight, there is a risk that data-driven innovations could outpace established legal safeguards, complicating enforcement, and accountability.

Confidentiality remains a cornerstone in legal practice, and the adoption of AI tools—particularly those relying on cloud computing—requires robust strategies to protect client privacy. Legal professionals must ensure that any transfer, processing, or storage of information through AI platforms upholds the strict confidentiality expectations of their clients. Failure to do so could erode trust and jeopardize the professional integrity of legal services.

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[45] World Bank, 'Nigeria Digital Economy Diagnostic Report' (2019) <https://documents1.worldbank.org/curated/en/387871574812599817/pdf/Nigeria-Digital-Economy-Diagnostic-Report.pdf> accessed 3 July 2024.

[46] GSM Association, 'The Mobile Economy Sub Saharan Africa 2023' <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2024/05/ME-SSA-2023.pdf> accessed 2 July 2024.

[47] Hartung, Bues and Halbleib (n 31).

[48] World Bank (n 43).

[49] Nigeria Data Protection Act, 2023.

Another pressing issue is the heightened exposure to cybersecurity risks resulting from the digitization of legal data and increased reliance on AI systems. As these platforms aggregate and analyse sensitive information, they become attractive targets for cyber-attacks. Proactive risk assessments and the implementation of advanced security measures are indispensable to safeguard legal data, maintain regulatory compliance, and protect the reputation of law firms and practitioners.

Opportunities in this area include encouraging the development of local AI solutions by Nigerian companies as a strategic step toward ensuring compliance with domestic data protection laws. Locally built tools are more likely to align with the specific requirements of Nigeria's regulatory environment, facilitating easier enforcement and fostering greater trust among users empowered by national oversight.

Additionally, employing advanced encryption and anonymisation techniques is instrumental in safeguarding client confidentiality when leveraging AI tools. These measures protect sensitive legal data during storage and transmission, minimizing the risk of unauthorized access and reinforcing the ethical obligations of legal practitioners. Furthermore, building cybersecurity capacity through targeted investment in training and infrastructure is essential for supporting safe and sustainable AI adoption. By enhancing the skills of legal professionals and fortifying technological defences, Nigeria can better anticipate and address vulnerabilities, ultimately preserving the integrity of its legal sector in a rapidly digitalizing world.

C. Regulatory framework for AI in legal services

The current regulatory framework in Nigeria is not fully equipped to address the challenges posed by AI in legal services:

The adoption of AI in legal services gives rise to important ethical considerations, particularly around accountability, transparency, and fairness. Current regulatory frameworks often struggle to address how responsibility is assigned for decisions made by complex algorithms. This gap can lead to uncertainty, especially when AI-generated recommendations influence significant legal outcomes, highlighting the need for clearer ethical standards and oversight.

Equally pressing are unresolved liability issues in the deployment of AI for legal work. The application of existing liability rules to errors or biases produced by AI systems remains ambiguous[50]. As a result, it is unclear whether responsibility lies with developers, legal professionals, or the firms implementing these technologies - especially when automated outputs lead to adverse consequences.

Moreover, the risk of unauthorized practice of law becomes relevant as AI tools increasingly simulate or assist with legal processes. The distinction between legitimate AI-supported services and unauthorized legal practice is not yet well defined[51]. Ambiguities in regulation may expose both clients and practitioners to legal and professional risks, underscoring the need for updated guidance that ensures both innovation and consumer protection.

However, these challenges also present opportunities. Regulatory innovation presents a compelling opportunity for Nigeria to lead in the realm of AI governance. By developing forward-thinking policies that simultaneously encourage technological progress and safeguard public interests[52],

[50] Mayson (n 39).

[51] Deborah L Rhode and Lucy Buford Ricca, 'Protecting the Profession or the Public? Rethinking Unauthorized-Practice Enforcement' 82 Fordham Law Review <https://ir.lawnet.fordham.edu/flr/vol82/iss6/2> accessed 4 July 2024.

[52] Access Partnership, 'Artificial Intelligence for Africa: An Opportunity for Growth, Development, and Democratisation: AI for Africa Whitepaper Sept 27.Pdf' <https://pic.strathmore.edu/wp-content/uploads/2019/03/PIC_AI_for_Africa_Whitepaper.pdf> accessed 4 July 2024.

Nigeria can create a regulatory landscape that attracts investment and positions the nation at the forefront of responsible AI development.

Moreover, collaboration with international bodies is essential for crafting robust AI governance frameworks. By engaging with organizations that specialize in AI regulation, Nigeria can leverage global knowledge and best practices, ensuring that domestic policies benefit from international expertise and harmonize with emergent global standards[53].
Transitioning to practical implementation, the concept of sandboxing offers a valuable mechanism for regulatory experimentation[54]. Introducing regulatory sandboxes would allow supervised and controlled testing of AI applications in legal services, enabling lawmakers and innovators to observe real-world impacts, address unforeseen challenges, and refine regulatory approaches before broader adoption.

D. *Training and adaptation of legal professionals*
The integration of AI into legal services will require significant changes in legal education and professional development. The skills gap present among Nigerian legal professionals stands as a significant barrier to the effective utilization of AI tools. Many in the field may not possess the requisite technical expertise needed to implement and maximize the benefits of artificial intelligence in legal practice[55]. This deficiency not only limits the potential for efficiency and innovation but also risks widening the divide between those able to adapt to new technology and those left behind, ultimately impacting the quality and competitiveness of legal services.

Furthermore, there tends to be resistance to change within the legal profession, as some practitioners are hesitant to embrace emerging technologies[56]. This reluctance can stem from concerns about the disruption of established practices or from uncertainty regarding the reliability and implications of AI-based tools. Such attitudes may slow the pace of technological advancement and integration, making it more challenging for the Nigerian legal sector to keep pace with global developments.
Additionally, the ethical competence of legal professionals becomes increasingly important as AI becomes more prevalent in legal processes. Lawyers must cultivate a deep understanding of AI ethics to ensure that these technologies are deployed responsibly and in accordance with professional standards. The ability to navigate ethical dilemmas posed by AI not only safeguards client interests but also strengthens public trust in the legal system's adaptation to technological innovation.

These challenges present opportunities for innovation in legal education and professional development. In response to the evolving demands of the legal profession, curriculum reform stands out as a crucial initiative. By integrating courses on technology and artificial intelligence into law school curricula, educational institutions can equip future lawyers with the skills and knowledge necessary to thrive in a technology-driven legal environment[57]. This proactive approach ensures that

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[53] OECD, *Artificial Intelligence in Society* (OECD 2019) <https://www.oecd-ilibrary.org/science-and-technology/artificial-intelligence-in-society_eedfee77-en> accessed 17 May 2024.
[54] C Novelli and others, 'Generative AI in EU Law: Liability, Privacy, Intellectual Property, and Cybersecurity' <https://doi.org/10.2139/ssrn.4694565> accessed 17 May 2024.
[55] Ifeoluwa Olubiyi, Ayobami Olaniyan and Ngozi Odiaka, 'The Role of Technology in the Advancement of Legal Education and Practice in Nigeria'' [2015] Researchgate <https://www.researchgate.net/publication/280566346_The_Role_of_Technology_in_the_Advancement_of_Legal_Education_and_Practice_in_Nigeria'/citations> accessed 3 July 2024.
[56] Susskind (n 3).
[57] Daniel Martin Katz, 'The MIT School of Law? A Perspective on Legal Education in the 21st Century' (2014) 2014 University of Illinois Law Review 1431 < https://illinoislawreview.org/wp-content/ilr-content/articles/2014/5/Katz.pdf accessed 16 August 2025>

graduates are not only familiar with traditional legal principles but are also prepared to engage with the digital tools now transforming legal practice.

Furthermore, continuing legal education tailored to artificial intelligence offers a pathway for current practitioners to bridge the gap between existing expertise and emerging technological trends[58]. Specialised AI-focused programs can facilitate ongoing professional development and enable lawyers to confidently navigate innovations that reshape client expectations and the delivery of legal services. Such initiatives help assure both relevance and adaptability among established professionals in the sector. Moreover, fostering interdisciplinary collaboration between law schools and computer science departments holds immense potential for advancing legal innovation. By encouraging joint research projects, cross-disciplinary teaching, and shared problem-solving initiatives, stakeholders can create fertile ground for the development of effective legal AI solutions[59]. This cooperative model not only drives technological progress but also enriches the intellectual and practical foundations of legal education, positioning the profession for future success.

The challenges facing AI adoption in Nigerian legal services are significant but not insurmountable. By proactively addressing these issues and seizing the opportunities they present, Nigeria has the potential to leverage AI to significantly enhance its legal service delivery. The next section will examine case studies that provide insights into successful AI implementations in other jurisdictions and any existing initiatives in Nigeria.

6. Case Studies

A. *Successful AI integrations in other jurisdictions*

1) United States: DoNotPay

In the United States, DoNotPay[60] served as a striking illustration of how artificial intelligence can streamline legal procedures. Initially developed to contest parking tickets, this pioneering 'robot lawyer' had successfully automated these processes and then steadily expanded to encompass issues such as consumer rights and immigration. The platform demonstrates that targeted AI applications can form the foundation for broader innovation, making legal assistance more accessible for everyday problems.

Moreover, a key lesson from DoNotPay's evolution is its capacity to enhance access to justice for routine legal concerns. By simplifying and automating common processes, the tool addresses a substantial gap where individuals may otherwise lack sufficient resources or knowledge to pursue legal action. This approach makes the legal system more approachable and less intimidating for the public, particularly in matters that traditionally overwhelm court dockets. In contrast, examining the relevance of this model to Nigeria reveals promising possibilities for adaptation. Similar automated systems could be designed to tackle prevalent legal challenges in the country, such as land disputes or consumer complaints. By automating basic legal services, such applications not only promise greater accessibility for citizens but also have the potential to relieve pressure on the court system, streamlining the resolution of recurring issues and improving overall efficiency.

2) Estonia: AI Judge for Small Claims

Contrary to widespread media reports dating back to 2019, Estonia has never developed or deployed an AI "robot judge" system for adjudicating small claims disputes. The Estonian Ministry of Justice officially clarified in February 2022 that reports about designing a

[58] Rostain, Skalbeck and Mulcahy (n 30).
[59] Ashley (n 19).
[60] *DoNotPay. "DoNotPay - Your AI Consumer Champion. "https://donotpay.com/(accessed August 15, 2025)*

"Robot/Judge" in *Wired* magazine from March 2019[61] were misleading, stating: "There hasn't been that kind of project or even an ambition in Estonian public sector. Estonian Ministry of Justice does not develop AI robot judge for small claims procedure nor general court procedures to replace the human judge"[62]. Instead, Estonia has implemented more modest but practical AI tools to support its judicial system, including Salme, a speech recognition assistant that transcribes court hearings with 92% accuracy, and a semi-automated payment order system for small claims that generates computer-based payment orders while maintaining human oversight. The country's actual judicial AI implementation focuses on automation of routine administrative tasks, anonymization of court decisions, and natural language processing for document analysis rather than autonomous decision-making.

Estonia's true judicial AI strategy demonstrates three critical principles for successful implementation. First, incremental automation rather than revolutionary replacement—focusing on supporting human judges rather than substituting them, as evidenced by Salme's role in transcription and the Court Information System (KIS) managing case workflows. Second, transparency and human oversight—even in automated payment orders, human verification remains essential for jurisdiction and document service. Third, integration with existing digital infrastructure—Estonia's judicial AI tools operate within their comprehensive e-governance ecosystem, connecting seamlessly through the X-Road data exchange platform to ensure secure, interoperable digital services. The country's approach emphasizes that AI in the judiciary should enhance efficiency and reduce administrative burdens while preserving the fundamental human elements of judicial decision-making and legal interpretation.

Nigeria's emerging AI judicial framework presents significant opportunities to learn from Estonia's measured approach while addressing the country's unique challenges of case backlogs, limited access to justice, and infrastructural constraints.

3) British Columbia, Canada: Smartsettle ONE

Smartsettle ONE[63] represents a groundbreaking artificial intelligence-driven online dispute resolution platform developed by iCan Systems Inc. that has demonstrated significant potential for transforming how disputes are resolved globally. The system employs nine sophisticated algorithms, including Visual Blind Bidding and Expert Neutral intervention, to resolve two-party disputes involving single numerical issues with remarkable efficiency - achieving a 62% settlement rate in controlled studies, with an additional 23% resolved through automated neutral intervention[64]. Unlike traditional negotiation platforms, Smartsettle ONE rewards collaborative behaviour rather than adversarial tactics, making it particularly suitable for commercial disputes, insurance claims, debt resolution, and consumer complaints where monetary settlements are involved.

The system's key technological innovations include its unique Visual Blind Bidding approach that maintains confidentiality while promoting transparency, automated agreement documentation with certified PDF generation, and a success-based pricing model charging only 2% of the negotiation range upon successful resolution. Notably, Smartsettle ONE

[61] Eric Niiler, 'Can AI Be a Fair Judge in Court? Estonia Thinks So' *Wired* <https://www.wired.com/story/can-ai-be-fair-judge-court-estonia-thinks-so/> accessed 3 July 2024.

[62] Ministry of Justice and Digital Affairs, "Estonia does not develop AI Judge" (16 February 2022) available at: https://www.justdigi.ee/en/news/estonia-does-not-develop-ai-judge (accessed 15 August 2025)

[63] *Smartsettle ONE, "Negotiate & Settle your cases online | Smartsettle ONE | Online Dispute Resolution Tool," Online Dispute Resolution Tool, available at: https://onlinedisputeresolution.io/, accessed 15 August 2025*

[64] Smartsettle Resolutions Inc., "Smartsettle ONE simulations deliver 62% settlement rate" (4 May 2023) available at https://www.smartsettleresolutions.com/post/smartsettle-one-trial-with-pgcl accessed 15 August 2025

achieved historic significance in February 2019 as the first AI system used for dispute resolution in a public court in England and Wales, successfully resolving a £2,000 dispute in just one hour[65]. The platform's strategic advantages lie in its ability to eliminate the traditional "negotiation dance," reduce resolution time from months to days, and harvest hidden value that conventional negotiations typically leave on the table - estimated at 16% of potential settlement value.

For Nigeria, Smartsettle ONE's relevance is particularly compelling given the country's rapidly evolving digital justice landscape and significant innovation initiatives in online dispute resolution. Nigeria has already established foundational ODR infrastructure through the Lagos Multi-Door Courthouse's ODR platform launched in 2016, and other applications[66]. With Nigeria's internet penetration reaching approximately 122 million active users and growing legal tech adoption driven by platforms like LawPavilion and emerging AI-powered tools, the country is well-positioned to integrate advanced ODR solutions like Smartsettle ONE. The platform's cost-effectiveness, accessibility, and ability to reduce court backlogs align perfectly with Nigeria's justice system challenges, where an estimated 70% of prison inmates are awaiting trial due to delays. As Nigeria continues its digital transformation with initiatives like the Regulatory Incubation Program for fintech innovation and increasing government investment in legal technology infrastructure, Smartsettle ONE could serve as a catalyst for Nigeria to become a regional leader in AI-driven dispute resolution, offering a scalable solution to address the country's access to justice challenges while supporting its growing digital economy.

4) **United States: COMPAS (Correctional Offender Management Profiling for Alternative Sanctions)**

COMPAS is an AI-driven risk assessment tool used in several U.S. states to assist judges in making decisions about bail, sentencing, and parole. Developed by Northpointe (now Equivant), it uses an algorithm to predict an offender's likelihood of recidivism based on various factors. Building on this point, the adoption of artificial intelligence in criminal justice decision-making processes exemplifies how advanced technology can be leveraged to enhance the efficiency and consistency of legal outcomes. By integrating AI into areas such as risk assessment, evidence analysis, and predictive policing, justice systems can potentially streamline complex judicial procedures and improve the allocation of resources.

Furthermore, the use of AI in sensitive legal contexts brings to light a host of potential benefits as well as significant controversies. On one hand, AI systems promise increased objectivity and the ability to process vast quantities of data that may otherwise overwhelm human decision-makers. On the other hand, concerns arise over issues such as algorithmic bias, ethical dilemmas, and the possibility of perpetuating systemic inequities—making the use of AI in these settings a subject of ongoing debate.

Moreover, these developments underscore the critical need for transparency and fairness in the AI systems implemented within the justice system. Ensuring that AI algorithms are interpretable, ethically designed, and subject to rigorous oversight is essential for maintaining public trust and upholding the values of justice and equity. Ultimately, the

[65] Hilborne, N. “Robot Mediator Settles First Ever Court Case.” ADR Institute of Canada, 19 February 2019. Available at: https://adric.ca/robot-mediator-settles-first-ever-court-case/ (accessed 15 August 2025)

[66] Olamiji Ogun, “The Rise and Rise of Online Dispute Resolution (ODR) in a Post-Pandemic World: Short Lessons for Nigeria” (LinkedIn, 12 February 2024) https://www.linkedin.com/pulse/rise-online-dispute-resolution-odr-post-pandemic-world-olamiji-ogun-hpe1f/

responsible integration of AI can support progress in criminal justice, provided that its risks and limitations are addressed with deliberate care.

In addressing the relevance of such technologies to Nigeria, it is important to note that risk assessment tools like COMPAS could be instrumental in enhancing the country's criminal justice system. By supporting decisions related to bail, sentencing, and rehabilitation programs, these tools have the potential to introduce more data-driven and consistent outcomes, which are especially beneficial in settings where resources are limited and human discretion can lead to inconsistent rulings.

Furthermore, one of the notable features of COMPAS lies in its ability to predict risk. Through the use of sophisticated machine learning algorithms, the tool is capable of analysing diverse factors to forecast the likelihood of an offender's recidivism. This predictive capability could assist Nigerian authorities in making informed determinations about offender management and public safety.

Additionally, COMPAS strives for standardization by promoting a uniform, data-driven approach to risk assessment across varying jurisdictions. For Nigeria, where practices may differ significantly from one region to another, implementing such a standardized tool could help harmonize decision-making processes nationwide.

Moreover, the efficiency introduced by automating portions of the risk assessment process cannot be understated. COMPAS's ability to process large amounts of information quickly and accurately has the potential to save time and resources—benefits that would be particularly valuable in Nigeria's often overburdened justice system.

Building on these points, COMPAS is designed for versatility, being applicable throughout multiple stages of the criminal justice process—including pre-trial evaluations, sentencing decisions, and parole hearings. If adopted in Nigeria, this multi-stage utility could streamline judicial proceedings and promote consistency at every phase of the legal process.
Finally, the large-scale implementation of COMPAS across several states in the U.S. demonstrates the scalability of such AI tools within a justice system. For Nigeria, considering a similar approach could facilitate widespread improvements and help meet the diverse needs of its criminal justice infrastructure.

In considering the potential challenges and controversies associated with AI-driven risk assessment tools, it is essential to recognize the serious concerns that have emerged in the context of COMPAS. One prominent issue is the allegation of racial bias; for example, a 2016 ProPublica investigation brought to light evidence suggesting that COMPAS may unfairly disadvantage African American defendants. This revelation raises critical questions about systemic inequities and the ethical implications of employing such technology in criminal justice settings.

Furthermore, the transparency of COMPAS has been a point of contention due to its proprietary algorithm. Without independent scrutiny or clear insight into how decisions are made, stakeholders have expressed concerns regarding accountability and the ability to challenge algorithmic outcomes. In environments where legal rights and public trust are at stake, such opacity demands careful reconsideration.

Additionally, due process remains a fundamental concern. Legal challenges in the United States have questioned whether the reliance on algorithmic risk assessments during sentencing undermines defendants' due process rights. These questions are especially pertinent in contexts where judicial fairness and adherence to legal standards are paramount. Turning to the potential application of a system like COMPAS in Nigeria, the adoption of standardized

risk assessment models across diverse regions and courts could offer consistency and help address disparities. By better identifying low-risk offenders, such tools may also aid in managing prison populations and support the implementation of alternative sanctions - an important consideration given the challenges typically faced by Nigeria's correctional facilities.

Moreover, the infusion of data-driven decision-making into criminal justice could help enhance efficiency, objectivity, and accountability. If properly designed and implemented, AI-based risk assessment might further mitigate the effects of human bias, helping to ensure fairer outcomes overall.

However, these prospects must be weighed against the lessons learned from international experience. Any AI tool introduced into Nigeria's justice system must be crafted with acute sensitivity to the risk of perpetuating or intensifying existing biases. Moreover, ensuring transparency in the algorithm's design and operation would be vital for building public trust and meeting legal standards of review.
Importantly, such AI tools should always serve as supports rather than replacements for judicial decision-making. Rigorous testing and validation tailored to the Nigerian context would also be necessary to safeguard accuracy and fairness, ensuring that reforms ultimately serve the goals of justice and equity.

As with other AI applications in the justice system, it is crucial to balance the potential benefits of efficiency and standardization with the fundamental rights of defendants and the overall integrity of the justice system.

5) British Columbia, Canada: Solution Explorer

The Solution Explorer is an innovative online tool developed by British Columbia's Civil Resolution Tribunal (CRT) to help citizens resolve legal issues in areas such as small claims, strata disputes, and motor vehicle accidents[67]. By guiding users through interactive pathways powered by expert system technology, it diagnoses their legal problems and offers tailored, plain-language advice. Users receive custom legal resources, template letters, and actionable steps which can resolve disputes independently—often without the need for formal tribunal involvement.

Key takeaways from the Solution Explorer's design include its free and anonymous access; user-friendly, step-by-step guidance; and seamless integration into the formal CRT process if informal resolution fails. The system's technology enables individuals to confidently address legal problems on their own, reducing barriers to justice and increasing public empowerment. It also continuously evolves by collecting user feedback, improving its pathways and legal content to remain effective and accessible.

For Nigeria, the Solution Explorer offers an inspiring blueprint for legal innovation and improved access to justice. With growing demand for affordable and scalable dispute resolution, Nigerian institutions could adopt similar guided online systems, tailored to local laws and languages. Such a tool would empower citizens to resolve common disputes without expensive legal representation or lengthy court proceedings, supporting a more efficient, accessible, and inclusive justice system across the country.

B. Pilot projects or initiatives in Nigeria

[67] Civil Resolution Tribunal, "Solution Explorer," available at: https://civilresolutionbc.ca/solution-explorer/ (accessed 15 August 2025)

While AI adoption in Nigeria's legal sector is still in its early stages, there are some noteworthy initiatives:

1) ***LawPavilion's AI-powered legal research***

LawPavilion has grown steadily, expanding its presence to every geo-political zone in the country. The company is recognized as a pioneer, having revolutionized law reporting and legal research with the introduction of Nigeria's first electronic law reporting system and later with advanced legal analytics software[68]. In 2007, LawPavilion launched its electronic law reports, which have become a staple for legal practitioners and judicial officers. Over the years, the platform evolved to allow local device installation and instant access to Supreme Court and Court of Appeal judgments, even in areas with limited internet connectivity.

LawPavilion's suite of products is tailored for legal professionals, judges, academics, and students. Its offerings include not only the flagship LawPavilion Electronic Law Reports (LPELR), but also tools for case management, court workflow systems, legal document drafting, and AI-powered research assistance. Notably, LawPavilion Prime is acclaimed for bringing the power of legal analytics to Nigerian lawyers, helping them form robust legal opinions and identify conflicts in case law more efficiently. In 2023, the company introduced PrimeGPT, Nigeria's first homegrown generative AI platform for legal research and drafting.

LawPavilion's services have transformed the practice of law in Nigeria, earning widespread credibility. Their legal tech solutions are regularly cited at the Supreme Court and trusted by institutions across the justice sector. In addition to making legal research more accessible, LawPavilion continues to innovate, optimize law practice, and support legal professionals in becoming more effective and impactful in their work.

2) ***DIYLaw's automated document generation***

DIYLaw is focused on meeting the needs of startups and small businesses, it provides a range of automated, plain-language legal solutions[69]. Its services include company and business registrations, with a streamlined process for preparing and filing incorporation documents, including Corporate Affairs Commission (CAC) registration. It also assists with intellectual property matters by conducting trademark searches and managing application filings.

For day-to-day business needs, DIYLaw offers user-friendly legal document generation, producing contracts such as non-disclosure agreements, employment contracts, tenancy agreements, and board resolutions, all crafted without unnecessary legal jargon for instant download. The platform also makes tax compliance simpler by helping businesses apply for their Tax Identification Number (TIN) and gain access to practical compliance tips. For more complex needs beyond template documents, its "DIY Engage" service connects entrepreneurs with vetted lawyers for personalized advice.

In addition to its paid services, DIYLaw is committed to educating and empowering the business community through free legal resources. These include blog posts, video "speed lawyering" sessions, and concise presentations on key legal topics — all designed to make the law more accessible and less intimidating for entrepreneurs.

3) ***National Judicial Council's Case Management System***

Building on the preceding analysis of digital transformation within the Nigerian judiciary, it is evident that the National Judicial Council's initiative to implement an electronic case management system marks a significant shift towards digitisation. This move not only

[68] LawPavilion, "Products" (2025) https://lawpavilion.com/products/ accessed 15 August 2025
[69] DIYLaw, "Home" (2025) https://diylaw.ng accessed 15 August 2025

streamlines court processes but also serves as a foundational step for incorporating more advanced technological solutions in the future.

Furthermore, by establishing an electronic infrastructure, the judiciary creates meaningful opportunities for the integration of AI technologies such as case analysis tools and predictive systems. These advancements have the potential to revolutionise legal workflows, improve efficiency, and enhance the accuracy of judicial decision-making.

In summary, these developments illustrate the growing momentum of digital reform in Nigeria's legal sector. While the country may still trail behind leading global jurisdictions in the adoption of AI, examining international best practices and successful local projects provides a pathway for tailored, context-specific implementation. This approach allows Nigeria to leverage technological innovations while aligning solutions with unique domestic needs and challenges.
Moreover, the achievements observed both internationally and within Nigeria emphasise the substantial promise that AI holds for improving legal services. At the same time, the experiences underscore the importance of addressing local regulatory requirements and ethical considerations to ensure responsible and sustainable deployment of AI systems.

With these points in mind, the next section will offer practical recommendations for facilitating the effective integration of AI into Nigeria's legal services sector, drawing from the insights, challenges, and opportunities identified throughout this discussion.

7. Recommendations

Based on the analysis of the current state of legal services in Nigeria, the potential applications of AI, and the challenges and opportunities presented, the following recommendations are proposed to facilitate the effective integration of AI into Nigeria's legal services sector:

A. Policy and regulatory changes to support AI adoption

It is submitted that the Nigerian government should prioritize the development of an AI-specific regulatory framework tailored to the legal services sector. Such a comprehensive framework would be instrumental in delineating the parameters of acceptable use, ensuring clarity around liability in cases of algorithmic error, safeguarding client data privacy, and promoting the ethical implementation of AI technologies. By taking proactive measures in regulatory planning, the government can foster innovation while concurrently addressing the unique risks posed by AI in legal practice.

Furthermore, the establishment of an AI ethics committee—comprised of legal practitioners, technologists, and ethicists—would provide essential oversight and expert guidance into the ethical complexities arising from the adoption of artificial intelligence in law. This committee could serve as a critical forum for ongoing dialogue, ethical analysis, and the recommendation of best practices, ensuring that the deployment of AI tools aligns with foundational principles of justice and professional integrity.

Additionally, the implementation of regulatory sandboxes by the Nigerian Bar Association, in collaboration with government stakeholders, would facilitate the controlled and secure testing of AI-powered legal applications[70]. These sandboxes would create an environment where new technologies can be evaluated under real-world conditions but within a structured setting that

[70] Financial Conduct Authority, 'FCA Regulatory Sandbox' <https://www.fca.org.uk/publication/fca/fca-regulatory-sandbox-guide.pdf>.

manages risk, promotes responsible innovation, and allows for informed regulatory refinement as AI solutions evolve.

Moreover, updating the Rules of Professional Conduct for Legal Practitioners to incorporate explicit guidelines concerning the use of AI is imperative[71]. This revision should address key considerations such as the competent use of AI tools, appropriate supervision of automated systems, and transparent client disclosure regarding reliance on AI-generated insights or recommendations[72]. Revising these professional standards will help legal professionals navigate emerging ethical and practical challenges, reaffirming the commitment to client welfare and maintaining high standards of legal practice in the age of artificial intelligence.

B. Investment in technological infrastructure

A key step in strengthening the foundations for technological advancement in the legal sector is to improve internet connectivity. The government should prioritise significant investments in broadband infrastructure to ensure reliable and high-speed internet access nationwide, with particular focus on rural communities where access remains limited[73]. Broader connectivity not only bridges the digital divide but also creates the essential conditions under which legal technologies powered by artificial intelligence can operate effectively, thereby ensuring inclusivity in the digital transformation of legal services.

Furthermore, establishing legal tech hubs would provide a critical platform to nurture innovation in this space. These hubs could serve as dedicated centres for collaboration, offering resources, networking opportunities, and mentorship for startups focused on AI solutions tailored to the legal industry. By creating such supportive environments, the government and private sector can accelerate the growth of a specialised ecosystem where cutting-edge tools are developed to address sector-specific challenges. In addition, the development of local data centres represents another indispensable component of the digital infrastructure. Hosting data locally helps address pressing concerns over data sovereignty, particularly in the context of sensitive legal information, while simultaneously improving the efficiency of AI systems that rely on low-latency processing. This approach not only strengthens compliance with domestic regulatory frameworks but also builds user trust in the integrity and security of digital legal solutions.

Moreover, encouraging cloud adoption within the legal profession is essential for ensuring scalable and cost-effective deployment of AI systems[74]. By formulating policies and offering incentives that promote migration to cloud platforms, governments can help legal institutions overcome barriers to digital transformation. Cloud solutions lower the cost of entry while enabling flexible integration of AI applications, positioning the legal sector to take advantage of technological advances in a manner that is both sustainable and future-oriented.

C. Collaboration between tech companies and legal institutions

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[71] Janine Cerny, Steve Delchin and Huu Nguyen, 'Legal Ethics in the Use of Artificial Intelligence' <https://www.squirepattonboggs.com/-/media/files/insights/publications/2019/02/legal-ethics-in-the-use-of-artificial-intelligence/legalethics_feb2019.pdf>.

[72] Stephen Embry, 'ABA's Opinion 511 and Its Impact on Legal Ethics in the AI Era: A Wake Up Call?' (*TechLaw Crossroads*, 15 May 2024) <https://www.techlawcrossroads.com/2024/05/abas-opinion-511-and-its-impact-on-legal-ethics-in-the-ai-era-a-wake-up-call/> accessed 9 July 2024.

[73] World Bank (n 43).

[74] Gartner Inc., 'Gartner Forecasts Worldwide Public Cloud End-User Spending to Grow 18% in 2021' (*Gartner*) <https://www.gartner.com/en/newsroom/press-releases/2020-11-17-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-grow-18-percent-in-2021> accessed 7 July 2024.

An effective strategy for advancing AI in the Nigerian legal sector is to foster public-private partnerships. Collaboration between government agencies, courts, and private technology companies can ensure that solutions are not only technologically sound but also contextually relevant to Nigeria's unique judicial system[75]. By involving multiple stakeholders, such partnerships can help align innovation with regulatory requirements while simultaneously leveraging private sector expertise and resources to achieve greater efficiency and scalability in legal AI initiatives.

Furthermore, establishing a legal tech innovation fund would provide a financial backbone to sustain these advancements. A dedicated fund could be used to support startups, research institutions, and legal organisations working to develop and deploy AI tools that strengthen access to justice and improve the delivery of legal services[76]. Such a fund would lower financial barriers to innovation and encourage risk-taking in the development of transformative solutions, drawing inspiration from international models such as legal services technology grants in other jurisdictions.

In addition, regular organisation of legal hackathons could create dynamic opportunities for problem-solving within the sector. By bringing together multidisciplinary teams of lawyers, developers, and designers, hackathons can rapidly generate prototypes of AI-driven applications targeted at specific challenges in Nigeria's judicial processes[77]. These events not only cultivate innovation but also foster a culture of collaboration and experimentation, producing tangible outcomes that can be further developed and deployed at scale.

Moreover, facilitating knowledge exchange remains crucial in sustaining long-term growth in this field. Conferences and workshops that convene legal professionals, policymakers, and technologists would allow for the sharing of practical experiences, best practices, and lessons from international experimentation with AI in law. Such platforms also encourage the building of trust across disciplines, creating an informed community of stakeholders who are better equipped to guide policymaking and adoption strategies within Nigeria's evolving legal technology ecosystem.

D. Education and training programs for legal professionals

Integrating legal technology and artificial intelligence into the education and training of legal professionals is another critical step toward preparing Nigeria's judiciary and legal community for digital transformation. As Katz observes, law schools should take the lead by updating their curricula to include dedicated courses on legal technology and AI[78]. Introducing these subjects at the formative stage of legal training ensures that future lawyers are equipped with the digital competencies necessary to thrive in an increasingly technology-driven legal landscape. In this way, technology literacy becomes as essential as doctrinal knowledge, enabling graduates to adapt seamlessly to emerging tools and practices.

Furthermore, in-service training must complement these academic reforms. Rostain, Skalbeck and Mulcahy argue that continuing development courses focusing on AI and legal technology should be required for practicing attorneys to maintain professional competence[79]. By institutionalising such programs as part of continuing legal education, lawyers can stay up to date with technological advancements while gaining practical skills for incorporating AI into their work. This not only enhances professional standards but also ensures that clients benefit from more efficient and technology-informed legal services.

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[75] Access Partnership (n 50).

[76] 'Technology Initiative Grant Program | LSC - Legal Services Corporation: America's Partner for Equal Justice' <https://www.lsc.gov/grants/technology-initiative-grant-program> accessed 6 July 2024.

[77] 'Global Legal Hackathon' <https://www.globallegalhackathon.com/> accessed 6 July 2024.

[78] Katz (n. 55)

[79] Rostain, Skalbeck & Mulcahy(30)

In addition, interdisciplinary collaboration plays a pivotal role in bridging the gap between legal knowledge and technological expertise[80]. Ashley highlights the importance of partnerships between law schools and computer science departments to develop joint programs that focus on legal technology[81]. Such initiatives create a pipeline of professionals who possess both technical proficiency and legal acumen, positioning them to design and implement AI solutions that are not only innovative but also sensitive to the nuances of legal practice.

Moreover, training the judiciary is paramount to the fair and effective integration of AI into the administration of justice. Judges and court staff must be given access to programs that explain not only the functional use of AI tools but also their ethical and legal implications. Informed judicial officers are better positioned to assess the reliability of AI-assisted evidence, ensure justice is delivered without undue automation bias, and guide the judiciary in setting standards for appropriate technological use in courts. This holistic approach to education—spanning students, practitioners, academics, and the judiciary—provides a comprehensive foundation for the responsible adoption of AI in the Nigerian legal system.

E. Data standardisation and digitisation efforts

To begin with, establishing uniform formats for data is a fundamental step in ensuring that legal information can be efficiently processed by AI systems. By creating and enforcing standardized templates for paperwork, the legal sector would simplify the way data is presented, thereby minimizing inconsistencies that often complicate automated handling[82]. Uniformity in formatting not only enhances interoperability across different platforms but also reduces the need for extensive preprocessing, making legal data more readily accessible for computational analysis. This step lays the groundwork for a structured data environment that can support more advanced applications of legal technology.

Building on this foundation, the digitisation of legal records becomes crucial. Digitising court files, case law, and related legal documents helps in creating a truly comprehensive and searchable database. Such a repository would not only make historical and ongoing legal materials more accessible but would also provide invaluable training data for AI models. With robust digitisation, the legal sector can ensure that vast amounts of textual data, previously locked in physical formats, become dynamic resources for both practitioners and researchers aiming to leverage AI-driven insights.

Furthermore, once digitisation is underway, it becomes necessary to establish clear and secure data-sharing protocols. These protocols would govern the anonymised exchange of legal data between institutions, ensuring that sensitive information remains protected while still enabling collaboration[83]. Secure sharing mechanisms are essential not only for safeguarding confidentiality but also for improving the quality of AI training data, as pooling knowledge from multiple sources significantly enriches the dataset. This collective approach fosters innovation by allowing AI systems to recognise broader patterns and develop more accurate analytical tools.

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[80] Ashley (n 19).
[81] Ashley (n 19).
[82] Ron Dolin, 'XML in Law: The Role of Standards in Legal Informatics' in Daniel Martin Katz, Ron Dolin, and Michael J Bommarito (eds), *Legal Informatics* (1st edn, Cambridge University Press 2021) <https://www.cambridge.org/core/product/identifier/9781316529683%23CN-bp-7/type/book_part> accessed 9 July 2024.
[83] the Law Society, 'Generative AI – the Essentials' (17 November 2023) <https://www.lawsociety.org.ukhttps://www.lawsociety.org.uk//en/Topics/AI-and-lawtech/Guides/Generative-AI-the-essentials> accessed 6 July 2024.

Consequently, to tie these initiatives together, the creation of a national legal data repository offers a centralised solution. By consolidating case law, statutes, regulations, and other legal materials in a single platform, this repository would serve as the backbone of AI-powered legal research and analytics. Centralisation ensures consistency, reduces redundancy, and streamlines access, enabling legal professionals to harness AI for more efficient case preparation, better-informed decision-making, and predictive analysis. Ultimately, such a repository would demonstrate how integrated data management can transform legal practice in the age of artificial intelligence.

F. Promote access to justice through AI

To begin with, supporting the development of AI-powered legal aid tools is an important way to expand public access to justice. Tools such as chatbots and virtual assistants can provide individuals with basic legal information and guidance, particularly for common issues like tenancy disputes, employment rights, or family law concerns[84]. By equipping citizens with readily available advice, these tools reduce dependence on costly legal consultations at the initial stage and empower individuals to navigate legal processes with greater confidence. Importantly, such innovations also help alleviate the heavy workloads faced by legal aid providers.

Moreover, the implementation of AI in alternative dispute resolution presents another promising avenue for improving efficiency and reducing costs in the justice system[85]. Technologies that assist mediation and arbitration can streamline the process by analysing case information, suggesting settlements, and even predicting likely outcomes[86]. By integrating AI into dispute resolution, litigants gain access to faster, less expensive alternatives to litigation, which is especially vital in contexts where court backlogs undermine timely justice.

Additionally, the development of multilingual AI legal tools is essential in a linguistically diverse country such as Nigeria. Since English remains the official legal language but is not widely spoken in many rural communities, creating AI systems capable of operating in major Nigerian languages broadens inclusivity. Such solutions would allow non-English speakers to receive legal guidance in their native tongues, thereby reducing barriers to justice. By localising legal technology through language accessibility, the justice sector can better serve citizens across cultural and regional divides.

Finally, establishing community legal tech centres in underserved areas would further strengthen access to justice. Equipped with AI-powered legal tools, these centres can provide affordable or even free legal support, thereby particularly benefiting low-income individuals who might otherwise be excluded from formal legal assistance[87]. Beyond offering direct services, these centres would also function as hubs for digital literacy, familiarising communities with emerging technologies that can help them assert their rights. Ultimately, community-based deployment complements national-level innovations by ensuring that technological advancements reach those most in need.

These recommendations aim to create a supportive ecosystem for the integration of AI in Nigeria's legal services sector. By addressing key challenges and leveraging opportunities, these measures can help Nigeria harness the potential of AI to enhance the efficiency, accessibility, and quality of its legal services.

8. Conclusion

[84] Bennett and others (n 25).

[85] Arno R Lodder and John Zeleznikow, *Enhanced Dispute Resolution through the Use of Information Technology* (Cambridge Univ Press 2010).

[86] Lodder, A. R. & Zeleznikow, J., Enhanced Dispute Resolution Through the Use of Information Technology (Cambridge University Press, 2010)

[87] Legal Services Corporation, 'The Justice Gap: Measuring the Unmet Civil Legal Needs of Low-Income Americans' <https://www.lsc.gov/sites/default/files/images/TheJusticeGap-FullReport.pdf>.

The integration of Artificial Intelligence into Nigeria's legal services sector presents a transformative opportunity to address longstanding challenges and enhance the delivery of justice. This study has explored the current state of legal services in Nigeria, the potential applications of AI, and the challenges and opportunities that arise from this technological shift.

A. ***Recap of AI's potential impact on Nigerian legal services***

One of the principal ways AI transforms the legal landscape is by increasing efficiency. Through the automation of routine tasks such as document review and legal research, AI technologies are able to substantially reduce both the time and resources required for many legal processes. This not only streamlines daily workflows but also enables legal practitioners to focus on more complex and strategically significant aspects of their work[88].

Furthermore, AI-powered tools—such as chatbots and automated document generation systems—hold the promise of improving accessibility to legal services[89]. These innovations can deliver basic assistance and self-service options, making legal support more widely available to a broader segment of the Nigerian population, including those who might otherwise be unable to afford traditional legal representation.

Moreover, the integration of predictive analytics and data-driven insights into legal practice enhances decision-making[90]. By analysing vast amounts of historical data, AI enables lawyers to develop more informed legal strategies and improve risk assessments, ultimately supporting sounder judgments and case outcomes.

In addition, the adoption of AI-driven process automation can lead to a reduction in costs[91]. By streamlining tasks and minimizing the need for manual labour in repetitive and routine legal work, AI lowers the operational expenses associated with legal services, which can, in turn, make these services more affordable for clients.

Consequently, one of the most pressing challenges AI could help address is Nigeria's significant case backlog[92]. With the advent of AI-assisted case management systems—and even the prospect of AI adjudication for straightforward matters—there is potential to expedite the resolution of cases. This could alleviate the strain on the judiciary and promote a more efficient system of justice delivery.

B. ***Future outlook and implications for the legal profession***

The integration of AI into Nigeria's legal services will likely lead to significant changes in the legal profession. In addition to the previously discussed impacts, the integration of AI into the legal field is poised to shift the skill requirements for lawyers. Legal professionals will increasingly need to cultivate new competencies, particularly technological literacy, and the ability to collaborate effectively with advanced AI systems[93]. This evolution reflects a broader trend toward interdisciplinary proficiency, where success depends not only on legal expertise but also on comfort with emerging technologies.

Moreover, the rise of AI within the legal sector is expected to give birth to entirely new roles. Positions such as legal technologists and AI ethics advisors will become vital, as law firms and legal departments seek professionals who can bridge the gap between law and technology while ensuring that AI systems are deployed ethically and efficiently. Additionally, these industry changes

[88] Susskind (n 3).
[89] Rostain, Skalbeck and Mulcahy (n 30).
[90] Katz, Bommarito and Blackman (n 29).
[91] Remus and Levy (n 22).
[92] Niiler (n 59).
[93] Michele DeStefano and Günther Dobrauz, *New Suits: Appetite for Disruption in the Legal World* (Staempfli Verlag 2019).

necessitate a corresponding transformation in legal education. Law schools will face growing pressure to adapt their curricula, incorporating instruction that prepares students for a more technology-driven legal environment[94]. Such curricular reforms are essential to equip future lawyers with the tools and mindset necessary to thrive in an AI-enhanced landscape.

However, this technological shift also brings about an evolving regulatory environment. Legal regulatory frameworks will need to be constantly updated and refined to address both the ethical and practical implications posed by the increasing use of AI in legal practice[95]. This ongoing adaptation is crucial to maintaining public trust and ensuring that AI augmentations uphold fundamental legal values.

Finally, as AI systems assume responsibility for repetitive and standardized tasks, there is considerable potential for increased specialisation among lawyers[96]. Freed from routine work, legal professionals may focus more intently on high-value, complex matters that demand human creativity, nuanced judgment, and interpersonal skills, thereby enhancing both the quality and distinctiveness of legal services.

While the potential benefits of AI in legal services are significant, it is crucial to approach this technological shift with careful consideration of the challenges it presents. Issues such as data privacy, algorithmic bias, and the digital divide must be proactively addressed to ensure that the benefits of AI are realised equitably across Nigerian society[97]. Moreover, the successful integration of AI into Nigeria's legal services will require a concerted effort from multiple stakeholders. Government bodies, legal institutions, technology companies, and educational institutions must work collaboratively to create an ecosystem that supports innovation while safeguarding the fundamental principles of justice[98].

As Nigeria stands at the cusp of this technological revolution in legal services, it has the opportunity to leapfrog some of the incremental stages of legal tech adoption seen in more developed jurisdictions. By learning from global best practices and adapting solutions to the unique context of the Nigerian legal system, the country can position itself as a leader in legal innovation in Africa.

In conclusion, while the path to fully integrating AI into Nigeria's legal services may be challenging, the potential rewards in terms of improved efficiency, accessibility, and quality of legal services make it a journey worth undertaking. As the legal profession evolves in the face of technological change, it must remain true to its core values of justice, equity, and the rule of law. By embracing AI thoughtfully and strategically, Nigeria's legal sector can enhance its capacity to serve justice and support the nation's development in the 21st century and beyond.

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[94] Katz (n 55).
[95] Department for Science, Innovation & Technology, UK Government, 'A Pro-Innovation Approach to AI Regulation – Government Response to Consultation' (2024) <https://assets.publishing.service.gov.uk/media/65c1e399c43191000d1a45f4/a-pro-innovation-approach-to-ai-regulation-amended-governement-response-web-ready.pdf> accessed 6 July 2024
[96] Northwestern University School of Law and others, 'The Great Disruption: How Machine Intelligence Will Transform the Role of Lawyers in the Delivery of Legal Services' (2019) 13 Actual Problems of Economics and Law <https://www.rusjel.ru/jour/article/view/25> accessed 7 July 2024.
[97] Mayson (n. 39).
[98] Access Partnership (n 50).