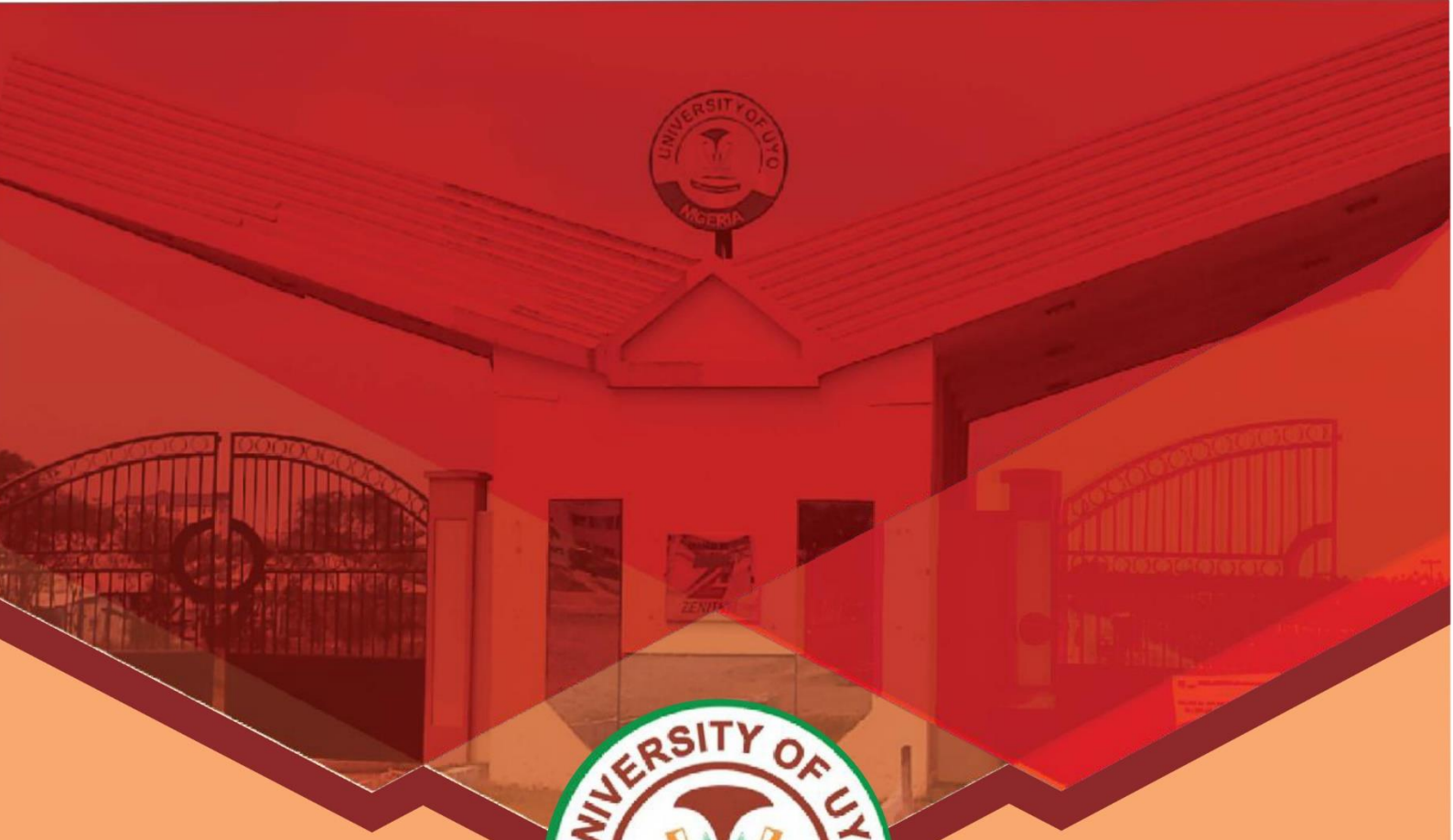

UNIVERSITY OF UYO LAW JOURNAL

VOLUME 12 (2024)
(AI SPECIAL EDITION)

Published by the Faculty of Law
University of Uyo, Nigeria

Exploring Artificial Intelligence (AI), Data Protection, And Digital Rights in Nigeria's Regulatory Framework and Global Standard

Edidiong Otong[*]

Abstract:
Nigeria's growing use of artificial intelligence (AI) has sparked worries about digital rights and data protection. With parallels to the tech bubble of the late 1990s and early 2000s, artificial intelligence's (AI) explosive growth has emerged as a major influence on contemporary culture. This paper examines how AI, data protection, and digital rights interact in Nigeria and emphasises the need for legislative frameworks to handle these problems. In particular, it assesses how well Nigeria's Data Protection Act 2023 addresses the particular difficulties AI presents. Important regulatory gaps, the difference between AI and robotics, and the significance of giving AI systems legal personhood are all further highlighted in this study. Policymakers are advised to fortify regulatory frameworks so Nigeria can fully utilise the fast advancement of artificial intelligence technologies.

Keywords: *Artificial Intelligence (AI), Data Protection, Digital Rights, Algorithmic Bias; Ethical AI Development; Transparency in AI; AI Regulatory Frameworks*

1. Introduction

Similar to the technological boom of earlier decades, the fast expansion of AI has changed sectors all around the world. AI has transformed from a specialised technology to a widely used instrument, spurring innovation in various industries, including healthcare, finance, and the military. With large expenditures in both research and real-world applications, such as cybersecurity, data analytics, and autonomous systems, the adoption of AI is growing in Nigeria, especially in the telecom and financial services industries, where it is used to improve operational effectiveness and service delivery.[1]

[*]By EDIDIONG EDET OTONG, LLB, LLM (In view), State Counsel, Ministry of Justice, Faculty of Law; Akwa Ibom State, Tel: 08021396514, 08151901026. Email: edidiongotong001@gmail.com.

[1] Ebenibo, Lionel, Joy Onma Enyejo, George Addo, and Toyosi Motilola Olola. "Evaluating the Sufficiency of the data protection act 2023 in the age of Artificial Intelligence (AI): A

Nigeria's regulatory system, on the other hand, is outdated and has sparked worries about ethical issues and data protection. AI's worldwide effects highlight the need for strong, flexible regulatory frameworks to reduce risks and promote innovation.[2] AI has grown unparalleled, profoundly influencing many aspects of contemporary life. The technology has infiltrated sectors ranging from education and defence to healthcare and finance because to its capacity to replicate human cognitive processes. AI-driven developments like autonomous systems and machine learning algorithms are changing decision-making processes, improving workflows, and increasing efficiency[3].

Controlling AI's development is becoming more and more important as it continues to transform sectors. AI has an influence on data privacy, security, and decision-making in the digital era, posing unavoidable ethical and legal issues.[4] Particularly in sectors like healthcare, banking, and law enforcement, unregulated AI may result in abuse, prejudice, and the violation of individual rights. Nigeria needs a more extensive legislative framework to handle the ethical and social dangers presented by AI technologies, even if the country is making progress in adopting these technologies. Efficient regulation guarantees the proper use of AI, promoting creativity while preserving human rights and guaranteeing responsibility. The growing dependence on AI highlights the pressing need for strong legal frameworks to handle its moral and practical ramifications.[5]

Thus, to provide an overview of the potential difficulties and privacy risks related to personal data processing and digital rights during the design and operation phases of AI systems in Nigeria, this article examines how these tools address concerns regarding personal data processing throughout the life cycles of AI systems – development and deployment. Additionally, it suggests strategies to close the gaps.

2. Definition of Artificial Intelligence

Adopting a uniform definition of artificial intelligence (AI) has been difficult, as it has been for several other technical ideas. This is particularly true given the diverse viewpoints of the numerous stakeholders. Furthermore, several technologies function automatically and display certain facets of human intellect, which are characteristics of artificial intelligence technology. It follows that no universally accepted definition of artificial intelligence encompasses the wide range of technologies that fall under this umbrella.

---

comparative case study of Nigeria and the USA." *International Journal of Scholarly Research and Reviews,* [2024] 05 (01) 088 107.

[2] Russell, Stuart J., and Peter Norvig, 'Artificial intelligence: a modern approach'. (Pearson, 2016).

[3] Ibid

[4] Ibid

[5] Ibid

One may offer many definitions to illustrate this variety. The OECD, for instance, describes an AI system as a machine-based system that may impact the environment by generating an output (decisions, suggestions, or forecasts) for a certain set of goals. It:
(i) perceives actual and/or virtual environments using data and inputs based on humans and/or machines;
(ii) abstracts these perceptions into models via analysis, either manually or automatically (e.g., using machine learning); and
(iii) employs model inference to develop possibilities for outcomes. AI systems may function with different degrees of autonomy.[6]

Although this description makes an effort to include some aspects of AI, it compromises on conciseness. Other entities have chosen a shorter definition to prevent this. For example, an AI system is "an engineered system that generates outputs such as content, forecasts, recommendations, or decisions for a given set of human-defined objectives," according to the International Organisation for Standards (ISO).[7] The effort to define AI has also included contributions from academics.[8] As the father of artificial intelligence, McCarthy describes AI as "the science and engineering of making intelligent machines, especially intelligent computer programs, related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable."[9]

There have been a few initiatives in Nigeria to define AI at the policy level. AI, for instance, is defined as "the creation of intelligent objects that work and react like humans to carry out certain tasks meant for intelligent beings without human intervention" in the NITDA's proposed national data plan.[10] This NITDA concept is intriguing since it implies that AI systems

[6] OECD 'OECD AI principles overview', https://oecd.ai/en/ai-principles (accessed 6 February 2025). The revised draft of the proposed EU's AI Act also defines AI in similar terms as 'a system that is designed to operate with elements of autonomy and that, based on machine and/or human-provided data and inputs, infers how to achieve a given set of objectives using machine learning and/or logic- and knowledge-based approaches, and produces system-generated outputs such as content (generative AI systems), predictions, recommendations or decisions, influencing the environments with which the AI system interacts' (n 11) art 3.
[7] International Organisation for Standardisation 'ISO/IEC 22989:2022 information technology – artificial intelligence – artificial intelligence concepts and terminology', https://www.iso.org/standard/74296.html (accessed 5 Feb. 2025).
[8] D Eke and others (eds) Responsible AI in Africa: Challenges and opportunities (2023); K Bala and others 'Artificial-intelligence-based models coupled with correspondence analysis visualisation on ART – Cases from Gombe State, Nigeria: A comparative study' (2023) 13 Life 715.
[9] J McCarthy 'What is AI/AI basics', http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html (accessed 5 February 2025).
[10] NITDA 'National data strategy draft' 2022, https://nitda.gov.ng/wp-content/uploads/2022/11/Final-Draft-National-Data-Strategy.pdf (accessed 30 March 2023).

don't need human interaction, which isn't always the case.[11] Although the aforementioned definitions cover some aspects of artificial intelligence, they also reinforce the fact that stakeholders have varying opinions about the concept, making it difficult to give it a single meaning. This suggests that, given AI's complexity and the various technologies (such as robotics, automation, and machine learning) that surround it, a practical approach to contextualising AI is perhaps necessary. Harmonising the several meanings is not the main goal of this paper. However, it recommends defining AI contextually to avoid using conceptual concepts that are too complicated for the average human to grasp. AI systems might thus be seen as intelligent machines created to "think" and "act" like people in a variety of situations with differing degrees of human involvement.[12] In this way, the system's intended function helps contextualise AI.[13]

3. Historical Background of AI on Data Protection and Digital Rights

The idea of data privacy has a long history and has developed in tandem with cultural customs, social conventions, and technical breakthroughs. The foundation for early ideas of privacy was laid by ancient societies like the Greeks and Romans, who prized individual liberty and solitude. But it wasn't until the Enlightenment that the idea of privacy started to be incorporated into laws, as intellectuals and thinkers like Jeremy Bentham and John Locke defended it as an essential component of personal freedom.[14] Governments and businesses began collecting and monitoring more data as a result of the 19th and 20th centuries' industrialisation and bureaucratic growth. Early data protection regulations were developed in response to concerns about the abuse of personal information and the need to safeguard individual privacy. One of the first instances is the 1890 Harvard Law Review essay by Samuel Warren and Louis Brandeis, which provided the framework for the present right to privacy in the United States. Later legislative initiatives, such as the European Convention on Human Rights in 1950 and the U.S. Fair Credit Reporting Act of 1970, strengthened the legal acceptance of data protection concepts and privacy rights. [15]

---

[11] There are many instances where AI systems require human input and intervention. See P Samuelson 'AI authorship?' (2020) 63 Communications of the ACM 22.

[12] See Society of Automobile Engineers 'SAE international releases updated visual chart for its 'levels of driving automation' standard for self-driving vehicles' 11 December 2018, https://www.sae.org/news/press-room/2018/12/sae-internationalreleases-updated-visual-chart-for-its-%E2%80%9Clevels-of-driving-automation%E2%80%9D-standard-for-self-drivingvehicles (accessed 5 February 2025)

[13] See B Marr 'What is the difference between weak (narrow) and strong (general) artificial intelligence (AI)' 21 July 2021, https://bernardmarr.com/what-is-the-difference-between-weak-narrow-and-strong-general-artificial-intelligence-ai/ (accessed 5 February 2025)

[14] John Babikian, "Securing Rights: Legal Frameworks for Privacy and Data Protection in the Digital Era." *Law Research Journal* 1, no. 2 (2023): 91-101.

[15] Ibid

The second part of the 20th century saw a profusion of privacy laws and regulations, fuelled by concerns about government monitoring, consumer rights, and technical advancement. Important turning points in the evolution of privacy and data protection laws were the creation of regulatory agencies like the U.S. Federal Trade Commission (FTC) and the passage of historic laws like the European Union Data Protection Directive of 1995 and the U.S. Privacy Act of 1974.[16] In an increasingly digitalised world, these legislative initiatives established guidelines for the gathering, use, and disclosure of personal data, laying the foundation for contemporary data protection laws.

New privacy and data protection issues arose with the introduction of the internet and the globalisation of information sharing. In response, regional blocs and international organisations started to standardise data protection rules and practices to preserve individual privacy rights while facilitating cross-border data flows. Initiatives like the General Data Protection Regulation (GDPR) of the European Union in 2018 and the Organisation for Economic Co-operation and Development's (OECD) Privacy Guidelines in 1980 are examples of coordinated attempts to create universal standards and guidelines for data protection.[17] Even while privacy rights and data protection legislation have advanced significantly, many issues in the digital era remain. Artificial intelligence, big data proliferation, and rapid technology breakthroughs provide new privacy and data protection problems. Furthermore, issues like algorithmic bias, surveillance capitalism, and the monetisation of personal data highlight the need for ongoing attention to detail and innovation in the field of privacy legislation and policy.[18]

4. The Impact of AI on data protection and digital rights in Nigeria

Several Nigerians are incorporating AI-based technology into their daily lives more and more, and it is important to think about how these technologies may affect Nigerians' fundamental rights. The application of AI has the potential to either strengthen or weaken Nigerian human rights safeguards in some ways, starting with the original design and continuing through the sale of the technology to Nigerians (if relevant) and its eventual end usage. The Nigerian constitution's Section 18(2) lays out the government's policy orientation for advancing science and technology.[19]

Many nations, both regionally and globally, have AI as one of their top policy priorities. This is due to several state programs that emphasise the use of AI applications for economic growth and development. Nigeria has shown that it is prepared to establish a framework for the study, development, use, coordination, and regulation of AI systems as a tool in

[16] Ibid
[17] Ibid
[18] Ibid
[19] Constitution of the Federal Republic of Nigeria, 1999, as amended.

the country's transformation agenda in the areas of economic growth, job creation, and government transparency, among other things.[20]

The Nigerian government and other pertinent stakeholders should carefully consider how to develop a national AI policy that will support an AI economy that upholds standards like algorithmic accountability, data protection, explainability of machine-learning model decision-making, and the protection of citizens' human rights from violations, among other things. This AI policy's formation necessitates knowledge of how AI and related technological advancements can meet Nigeria's national objectives and assist in resolving a wide range of regional issues, from healthcare to food security. Given its large youth population, Nigeria needs a policy that will both control the risk of future job displacement and, on the other hand, provide guidance on how young people might engage in the emerging AI economy.

Indisputably, AI will affect business dealings, how businesses manufacture, how consumers consume, and how the Nigerian government provides services to its populace. The COVID-19 pandemic has brought attention to Nigeria's reliance on digital networks and technologies for judicial, educational, cultural, health, and commercial activities. For instance, some judges had to use speech-to-text transcription during Zoom court meetings just in the last 12 months.[21] In a broader sense, the Federal Ministry of Aviation in Nigeria purchased two AI-enabled robots to enhance passenger safety.[22] The robots are in charge of passenger identification and screening.[23] The abrupt use of AI and other digital technologies has also led to new risks for the commercialisation or exploitation of Nigerians' data.[24]

Relevant policy considerations are therefore necessary to address issues of algorithmic unfairness, privacy loss, lack of transparency, and the general difficulty of persuading Nigerians to comprehend and trust AI. Given the significant stakes, it is imperative that a rights-respecting AI

---

[20] Emma Okonji, "Enhancing Government Service Delivery with Technology" *Thisday Nigerian Newspaper* (14 October 2021) https://www.thisdaylive.com/index.php/2021/10/14/enhancing-government-service-delivery-with-technology/ Accessed 5 Feb. 25

[21] Deji Elumoye, "Osinbajo: Judiciary Needs to Embrace Technology, Innovation" *Thisday Nigerian Newspaper* (27 July 2021) < https://www.newsheadlines.com.ng/thisday-newspapers-headlines-news-today/2021/07/27/osinbajo-judiciary-needs-to-embrace-technology-innovation />\ Accessed 5 Feb. 25

[22] Kunle Adebajo, "Abuja Airport Deploys AI Robots To Scan Passengers, Take Body Temperature", (28 June 2020), online: *HumAngle Magazine* <https://humangle.ng/abuja-airport-deploys-ai-robots-to-scan-passengers-take-body-temperature/> Accessed 5 Feb. 25

[23] Kelvin Osa-Okunbor, "Deploying identity management for air travel - *The Nation Nigeria News"*, (July 29 2020), online: Latest Nigeria News, Nigerian News-papers, Politics <https://thenationonlineng.net/deploying-identity-management-for-air-travel/> Accessed 5 Feb. 25

[24] (e.g., to spread misinformation and disinformation and create societal divides).

policy be developed in order to meet the socioeconomic requirements and expectations of the Nigerian people while also giving Nigeria's democratic ideals and constitutional provisions top priority. A rights-respecting AI policy that encourages the appropriate and creative use of data can spur significant action from policymakers and establish a robust AI ecosystem that is focused from the outset on the defence and enhancement of Nigerians' human rights. [25]

5. The current regulatory gaps and challenges in fully implementing AI into Data Protection and Digital Rights in Nigeria

Leading the front in the debate for an AI regulatory framework has been the National Information Technology Development Agency.[26] By providing a legal framework for data processing—essential for AI systems that depend on massive datasets—the March 2020 publication of NITDA's rules for handling personal data indirectly influenced AI. November of the same year saw the establishment of the National Centre for Artificial Intelligence and Robotics[27]. The Nigerian government made a major commitment with this project to use AI as a key element of its plan for the digital economy. The NCAIR's mission was to support AI-related research, innovation, and policy formation while laying the groundwork for later regulatory initiatives. To establish a systematic method of AI governance, NITDA started soliciting input from stakeholders for a National Artificial Intelligence Policy in 2022.[28]

NITDA finished the initial draft of this policy by March 2023, to provide a thorough framework for the research and use of AI in various industries. It underlined the need for data security, ethical concerns, and conformity to global best practices in addition to coordinating AI use with national democratic and human rights ideals. Nigeria released its first National Artificial Intelligence Strategy in August 2024. The National Centre for Artificial Intelligence and Robotics[29], the Federal Ministry of Communications, Innovation, and Digital Economy[30], and NITDA worked together to design the strategy. Among other areas, this policy seeks to use AI for national growth in the fields of education, healthcare, and agriculture. In addition to an expert group to advise on the ethical ramifications of AI and inclusion across many social segments, it advocates for the development of infrastructure.

Despite these developments, the NAIS is still in draft shape and, although it seems to be a positive step, it still needs financing sources,

---

[25] Jake Effoduh Okechukwu. "Towards A rights-respecting artificial intelligence policy for Nigeria." *Paradigm Initiative (November 2021). <https://paradigmhq. org/wp-content/uploads/2021/11/Towards-A-Rights-Respecting-Artificial-Intelligence-Policy-for-Nigeria.pdf* > Accessed 5 February 2025.

[26] *National Information Technology Development Agency (NITDA) Act 2007*

[27] National Centre for Artificial Intelligence and Robotics

[28] National Artificial Intelligence Policy 2022

[29] Ibid, 28

[30] Federal Ministry of Communications, Innovation, and Digital Economy

comprehensive implementation schedules, and a solid basis of current AI rules. Existing legal frameworks have an indirect influence on the use of AI, but there are currently no laws in Nigeria that specifically control it. The Nigeria Data Protection Act[31], for example, provides a fundamental legislative framework for data protection, which is essential for any AI system handling personal information. According to the NDPA, data subjects now have the right to challenge decisions that are made only based on the automated processing of their data without human involvement if such decisions significantly affect their legal status or other aspects of their lives. Furthermore, some industry-specific laws control the use of AI in sectors including banking and telecom services. Additionally, the Security and Exchange Commission (SEC) Rules on Robo-Advisory Services govern financial services that may use AI technology, and the Nigerian Communication Commission Act[32] oversees telecommunication services that may use AI technologies.

In the fight to provide a thorough framework for AI governance in Nigeria, NITDA is also actively participating. To improve operational effectiveness, it promotes using AI in national security frameworks. This strategy is in line with NITDA's Strategic Roadmap and Action Plan (SRAP 2.0), which places a high priority on strategic alliances to use technology breakthroughs for the benefit of the country.[33] The organisation places a strong emphasis on cooperation across different industries, especially the communication and information sectors. As part of its efforts to promote ethical AI research, NITDA established the National Centre for Artificial Intelligence and Robotics (NCAIR). To ensure that advancements in AI projects are in line with human rights principles and social values, the agency is forming an AI Ethics Expert Group, as stated in the NAIS. Furthermore, in 2023, NITDA said that they had begun and were in the process of creating a Code of Practice for AI, which would provide guidelines for the appropriate use of ChatGPT and other AI technologies. To effectively manage AI technologies in Nigeria, NITDA's involvement in AI regulation includes developing policies, encouraging cross-sector partnerships, encouraging moral behaviour, and incorporating pre-existing legal frameworks. By these initiatives, NITDA hopes to protect the public interest while establishing Nigeria as a pioneer in moral AI innovation.[34]

Thankfully, in recognition of worldwide developments in this field, the Nigerian National Assembly has also stated plans to create thorough legislative frameworks controlling the usage of AI. Rt. Hon. Tajudeen Abbas, Speaker of the House of Representatives, has promised that the 10th

[31] Nigeria Data Protection Act 2023
[32] Nigerian Communication Commission Act 2023
[33] Obidimma, Emmanuel Oc, and Richard Onyekachi Ishiguzo. "Artificial Intelligence and Cybercrime Investigation in Nigeria: Addressing the Legal And Technical Skills Gaps." *African Journal of Criminal Law And Jurisprudence* 8 (2023).
[34] Ibid

National Assembly would create a legislative framework to control the nation's adoption of artificial intelligence or AI. Abbas made this statement at Monday 2023–2024 matriculation ceremony at the University of Benin (UNIBEN)/National Institute for Legislative and Democratic Studies (NILDS) in Abuja.[35] We expect the National Assembly to quickly draft legislation governing Nigeria's use of artificial intelligence. To help legal practitioners embrace AI technology, the Nigerian Bar Association's Section on Legal Practice Technology and Law Committee has proactively developed such guidelines.[36]

6. Case studies and examples illustrating the intersections between AI, data protection, and digital rights

Among the many instances of artificial intelligence (AI) being used in the content generation process are news articles, scholarly papers, social media postings, images, and even chatbot talks. The possibility that artificial intelligence (AI) would either duplicate or replace human conduct has raised concerns as the technology develops and finds a wide range of uses in various fields and industries. As a result, numerous legal bodies and scholars are beginning to consider the potential effects of AI on society and the law.[37] These technologies are currently causing problems for many areas of law.[38] However, we shall particularly address the potential effects of AI-generated works on intellectual property law in this article, with a focus on copyright law. With a particular focus on the ChatGPT case study, we will quickly examine some of the copyright concerns associated with the use of AI systems that detect and produce text, known as large language models (LLMs).[39] As a widely used and well-known example of AI content creation, ChatGPT offers a useful prism through which to view some of the core copyright issues at the heart of this quickly expanding industry.

---

[35] National Assembly Moves to Establish Legal Framework for Artificial Intelligence in Nigeria, April 25th, 2024. Retrieved online from https://nilds.gov.ng/national-assembly-moves-to-establish-legal-framework-for-artificial-intelligence-in-nigeria.
Accessed 6 February 2025

[36] *Guidelines For the Use of Artificial Intelligence in the Legal Profession in Nigeria*, The Nigerian Bar Association - Section on Legal Practice
Technology and Law Committee, April 2024.

[37] See N Helberger and N Diakopoulos, "ChatGPT and the AI Act" (2023) 12 Internet Policy Review 10.14763/2023.1.1682.

[38] See Garante per la Protezione dei Dati Personali, "Intelligenza artificiale: il Garante blocca ChatGPT. Raccolta illecita di dati personali. Assenza di sistemi per la verifica dell'età dei minori" (31 March 2023), <https://www. garanteprivacy.it/home/docweb/-/docweb-display/docweb/9870847> (last accessed 10 February 2025).

[39] See, eg, Y Goldberg, Neural Network Methods for Natural Language Processing (Cham, Springer 2017) p 105; P Henderson et al, "Ethical Challenges in Data-Driven Dialogue Systems" (2018) Proceedings of the 2018 AAAI/ ACM Conference on AI, Ethics, and Society 123; CD Manning et al, An Introduction to Information Retrieval (Cambridge, Cambridge University Press 2008) p 238.

OpenAI, a San Francisco-based artificial intelligence company[40], developed the language model known as ChatGPT, which can produce natural language responses to a range of questions. For problems involving natural language processing, an LLM is a very successful kind of machine learning procedure. Its primary focus is language modelling, which is the process of developing probabilistic models that, given the words that come before them, can correctly anticipate the next word in a given sequence.[41] By exposing the model to vast volumes of textual data, it is able to learn the likelihood of word occurrences as well as patterns in language usage. Language modelling is a crucial part of contemporary natural language processing applications since it aims to build a system that can reliably produce human-like replies and recognise natural language input.[42]

It is crucial to emphasise that the language modelling assignment cannot inevitably result in the acquisition of meaning because it only uses form as training input. Thus, the ability to "agere sine intelligere," or act without fully comprehending the consequences, is what distinguishes these models.[43] This idea emphasises the intriguing aspect of their method of operation as, despite their limited comprehension of the underlying mechanisms, they are capable of carrying out intricate tasks and generating outcomes that can be surprisingly accurate. This phenomenon calls into question accepted ideas of intelligence since these models can generate remarkable outcomes by combining complex pattern recognition skills, large data sets, and sophisticated algorithms. Their capacity to "agere sine intelligere" exemplifies machine learning's strength and its potential to transform several industries, including image identification and natural language processing. In today's world, introducing language models and other AI content-producing systems has been nothing short of revolutionary. Within seconds, these computers can produce material on any subject, language, and format. These technologies have a huge influence, and they have raised many ethical and legal questions that require investigation, particularly from the standpoint of copyright.[44]

---

[40] A. Radford, K. Narasimhan, T. Salimans, I. Sutskever, Improving Language understanding by generative pre-training Homol. Homotopy Appl., 9 (1) (2018), pp. 399-438 <https://www.cs.ubc.ca/~amuham01/LING530/papers/radford2018improving.pdfGoogle Scholar> (last accessed 10 February 2025).

[41] See EM Bender and A Koller, "Climbing towards NLU: On Meaning, Form, and Understanding in the Age of Data" in Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (Association for Computational Linguistics, Online, 2020) pp 5185–98 (defining the term "language model" as any system trained only on the task of string prediction, whether it operates over characters, words or sentences and sequentially or not).

[42] Ibid

[43] L Floridi, "AI as Agency without Intelligence: on Chat GPT, Large Language Models and Other Generative models" (2023) 36 Philosophy & Technology 1, 6

[44] See, eg, R Abbot, The Reasonable Robot (Cambridge, Cambridge University Press 2020)

The potential protection of an AI-generated "creative" work under copyright or other comparable intellectual property (hence referred to as "the output") has been a major topic of discussion in the current legal dispute around generative AI and copyright.[45] But it's crucial to understand that using copyrighted material—here referred to as "the input"—to train and create AI systems also raises serious copyright concerns. Indeed, to produce high-quality outputs, AI systems need enormous amounts of training data, many of which contain copyrighted content.[46] This raises questions concerning fair use and derivative works, as well as whether and how such data may be gathered and used legally. Furthermore, it is imperative to address the copyright issues that arise from the training of AI models as these systems become more common and essential in our daily lives. This entails creating derivative works from protected sources, frequently involving data manipulation or change to improve their usefulness for teaching. There have been multiple lawsuits against the developers of generative AI systems, such ChatGPT, alleging copyright infringement as a result of the recent escalation in the legal debate around AI.[47] These legal actions give rise to justifiable worries over the illegal use of copyrighted content to produce original creative works. Given these difficulties, addressing the copyright issues related to AI requires a thorough and integrated strategy that takes into account both the inputs and outputs of AI systems. To perhaps propose legislation that promotes the ethical and responsible use of AI training data while safeguarding intellectual property rights, this inquiry will also look deeper into the policy justifications for taking a free or open-access approach.[48]

7. International frameworks and standards and its influence on Data Protection and Digital Rights in Nigeria

Over the past 20 years, Nigeria has been developing and implementing important institutional policies and regulatory frameworks to promote innovations and the broad use of ICTs by enterprises, local and global communities, and public and private institutions.[49] ICT infrastructure provision for smooth connections and effective operations of all Nigerian economic sectors is anchored by the communications

[45] Bonadio and L McDonagh, “Artificial Intelligence as Producer and Consumer of Copyright Works: Evaluating the Consequences of Algorithmic Creativity” (2020) 2 Intellectual Property Quarterly 112

[46] Ibid

[47] See, eg, Getty Images (US), Inc. v. Stability AI, Inc., No. 1:23-cv-00135-GBW (D. Del. Mar. 29, 2023)

[48] See, eg, European Parliament, Resolution on a comprehensive European industrial policy on artificial intelligence and robotics, (2018/2088 (INI)), 12 February 2019

[49] Martha Onyeajuwa Kanene. "Critical Assessment of Institutional and Regulatory Frameworks for Personal Data Protection in Digital Platform ecosystem: a study of Nigeria" (22nd Biennial Conference of the International Telecommunications Society (ITS): "Beyond the Boundaries: Challenges for Business, Policy and Society", Seoul, Korea, 24th-27th June, 2018)

industry. Four digital mobile network operators were licensed by the Nigerian Communications Commission (Commission) in 2001. As of April 2018, their market shares are as follows: MTN (41%), GLOBACOM (25%), Airtel (24%), and 9mobile (10%).

The National Broadband Policy Implementation Strategy and the Open Access Next Generation Broadband Network model were introduced by the Federal Government of Nigeria (FGN) in 2013 to facilitate the efficient nationwide deployment of broadband.[50] These initiatives allow for an inclusive, equitable, and transparent licensing process and provide incentives to both current and prospective investors without discrimination. Impressive rise in Internet users is being produced by this method. There were 101.2 million Internet users overall in April 2018.[51]

The digital environment is preceded by the Internet, which allows for real-time operations. Therefore, broadband penetration in developing nations like Nigeria increases the accessibility of ICT services and makes it easier for the unserved, underserved, unbanked, and underbanked segments of the population to have internet access. This allows them to take advantage of Digital Financial Services (DFS) and subsequently engage in the expanding digital ecosystem.[52] As seen globally, digital technology is still influencing many aspects of our lives, including behaviour, needs, opinions, knowledge sharing, choices, and more. These factors affect market structure and the Nigerian economy.

Notwithstanding the rhetoric about these advantages, platform business models appear to serve the dual purposes of empowering businesses and upending the sectors in which they are active.[53] Businesses, for example, abuse their position to dominate the ecosystem, control the supply of highly sought-after items, and stifle competition by underpaying employees. Other issues include giving businesses the chance to profit from the loopholes in the current regulations by exploiting consumers' rights by profiting from their data without obtaining their consent, often at little or no risk to them.[54]

Numerous national and international frameworks on consumer privacy and data protection have been prompted by this perceived harm to consumers' well-being. Among the international frameworks are the Asian-Pacific Economic Cooperation (APEC) Privacy Frameworks, the Organisation for Economic Co-operation and Development (OECD), and Convention 108 of the Council of Europe. Internationally recognised

[50] Ibid
[51] NCC. (n.d.-a). *Nigerian Communications Commission.* Retrieved from ncc.gov.ng: https://www.ncc.gov.ng/stakeholder/statistics-reports/industry-overview
[52] CBN, *Regulatory Framework for Mobile Money, 2012.* Lagos: Federal Govt Press.
[53] Srnicek, Nick. "Value, rent and platform capitalism." *Work and labour relations in global platform capitalism*. Edward Elgar Publishing, 2021. 29-45.
[54] Ibid

guidelines for online privacy and data protection tactics have been established by these frameworks.[55]

Harmonising policies among its member states has always been a priority for the African Union (AU). The 2014 AU Malabo Convention rules on Cyber Security and Personal Data, however, were only ratified by 15 of the 54 AU countries. The African Union Commission (AUC) and the Internet Society (ISOC) collaborated to create the Privacy and Personal Data Protection Guidelines for Africa, including input from academics, civil society organisations, and regional and international privacy experts. Six data protection principles are identified in Article 13 of the Malabo Convention, which corresponds to the eight principles of the EU General Data Protection Regulation (GDPR).[56]

These eight guidelines are commonly acknowledged to offer "a solid foundation for online privacy policies and practices" and have been implemented in more than 100 countries.[57] These serve as the foundation for rules that have been approved by the Commonwealth, the UN General Assembly, and the European Union's General Data Protection Regulation 2016.[58] The following eight guidelines govern the permissible processing and use of personal data:

i. collection limitation,
ii. data quality,
iii. purpose specification, and
iv. use limitation.
v. Security measures,
vi. Transparency,
vii. Personal involvement,
viii. Responsibility

Since 2016, the EU's General Data Protection Regulation (GDPR) has been making headlines globally. Regardless of the destination of the data, EU individuals are protected by GDPR. Processing done by businesses operating inside the EU is covered. Organisations outside the EU that provide products or services to EU citizens are likewise covered.[59] It implies that any business, wherever it may be located, whose database contains personally identifiable information about EU individuals is subject to the GDPR as of May 25, 2018. Both processors and controllers are subject to particular legal obligations under the GDPR, including obligations if a processor is at fault for a breach. Controllers now have

[55] ISOC, & AU. (2018, May 8). *Personal Data Protection Guidelines for Africa: A jiont initiative*
of the Internet Society and the Commission of the African Union. Retrieved from internetsociety.org: https://cdn.prod.internetsociety.org/wp-content/uploads/2018/05/AUCPrivacyGuidelines_2018508_EN.pdf
[56] Ibid
[57] Ibid
[58] Ibid
[59] Ibid

further responsibilities under the GDPR to make sure their agreements with processors adhere to the regulations.[60]

The challenges that have been brought to light by the platform ecosystem appear to point to the necessity of strong institutional and legislative frameworks in order to guarantee sufficient consumer privacy and data protection in Nigeria. Nigerian and African consumer protection practices are still in their infancy, although developed nations have laws on consumer privacy and data protection and are working to strengthen them.[61]

8. Comparative Analysis from other countries, it best practices and lessons learned

Regarding AI research, development, and application worldwide, Canada is in the forefront. According to Dutton[62], it was the first nation to develop a national AI policy paper in 2017. According to Canada 2023[63] and CIFAR 2023[64], the Pan-Canadian Artificial Intelligence Strategy is a framework "designed to proactively identify and mitigate risks to prevent harms and discriminatory outcomes, while acknowledging the unique nature of AI ecosystem and ensuring that research and responsible innovation are supported." Through the development and evaluation of regulations and guidelines in close collaboration with stakeholders on a regular cycle and the adaptation of enforcement to the needs of the changing environment, the Canadian government adopted an agile approach to AI self-regulation "that will not stifle responsible innovation or needlessly single out AI developers, researchers, investors, or entrepreneurs".[65]

Along with the US, UK, and EU, Canada also took part in creating a worldwide Partnership on AI (GPAI) to encourage the global coordination in AI governance policies.[66] The Canadian strategy aims to avoid or lessen the harm caused by AI applications to people by forcing developers and users to adhere to a set of principles that are in line with new international AI governance standards and to enforce compliance with those principles, including consequences for non-compliance. According to Canada[67], these

[60] Ibid
[61] ITU-TFG, *Commonly identified Consumer Protection themes for Digital Financial Services* (2016), Geneva: ITU.
[62] Tim Dutton, "An overview of national aı strategies." *Erişim Tarihi: Nisan* 16 (2023).
[63] Canada, *The Artificial Intelligence and Data Act (AIDA) – Companion document. 2023.* Ottawa: Government of Canada. Available at: https://ised-isde.canada.ca/site/innovation-better-canada/ en/artificial-intelligence-and-data-act-aida-companion-document. (Accessed on 13 February 2025).
[64] IFAR, *The Pan-Canadian AI Strategy*, 2023. Toronto: Canadian Institute for Advanced Research (CIFAR). Available at: https://cifar.ca/ai/. (Accessed 13 January 20234.
[65] Ibid
[66] Ibid
[67] Ibid

values include human supervision and monitoring, openness, equality and justice, safety, accountability, validity, and robustness.

According to Wyden[68], an Algorithmic Accountability Bill was introduced in the US Congress in February 2022, just before the exponential growth of AI in December of the same year. The bill requires businesses to "assess the impacts of the automated systems they use and sell, creates new transparency about when and how automated systems are used, and empowers consumers to make informed choices about the automation of critical decisions." However, the bill was shelved due to a lack of progress in the parliamentary process.

In early 2023, US Senate Majority Leader Schumer declared his plan to present legislation in Congress in the form of a framework with four "guardrail" safeguards to provide transparent, responsible AI and to lessen its misuse and disinformation in a way that allows for the continued development of innovative AI. In addition to safeguarding individuals and society from potential damage, these guidelines address who, where, and how it should be done. To maximise the benefits to society, the framework will limit any negative effects and damage, regulate AI, give knowledge, and match these systems with the nation's basic values. Additionally, the law would mandate that AI technology undergo independent, transparent testing and assessment before its release.[69]

President Biden's announcement of a voluntary "Blueprint for an AI Bill of Rights" in early October 2023 marked the first significant regulatory advancement. The document outlined a flexible, civil rights protection approach to AI.[70] However, it tries to shield individuals "from algorithmic discrimination, privacy intrusion, and other harms"[71] while acknowledging the use of AI for law enforcement monitoring. There was a mixed response to the AI Bill of Rights. Compared to the measures that other governments, particularly in the EU, first explored, some analysts see it as "too little, too late," while others say it is a straightforward, gradual step forward.[72] Governments seem to be reluctant to enact too stringent

---

[68] Wyden, R.. *Wyden, Booker and Clarke Introduce Algorithmic Accountability Act of 2022 to Require New Transparency and Accountability for Automated Decision Systems, 2022* Washington, DC: US Senate. Available at: https://www.wyden.senate.gov/news/press-releases/wyden-bookerand-clarke-introduce-algorithmic-accountability-act-of-2022-to-require-new-transparencyand-accountability-for-automated-decision-systems. (Accessed on 13 February 2025).

[69] Schumer, C., *Schumer Launches Major Effort to get ahead of Artificial Intelligence, (2023)* Washington, DC: US Senate. Available at: https://www.democrats.senate.gov/newsroom/press-releases/ schumer-launches-major-effort-to-get-ahead-of-artificial-intelligence. (Accessed on 13 February 2025).

[70] Strickland, E, *The Who, Where, and How of Regulating AI*, (2023) Available at: https://spectrum. ieee.org/ai-regulation-worldwide. (Accessed on 13 February 2025).

[71] Ibid

[72] Atlantic Council, 2023a. *What does Biden's new executive order mean for the future of AI?* Available at: https://www.atlanticcouncil.org/blogs/new-atlanticist/experts-react/experts-react-whatdoes-bidens-new-executive-order-mean-for-the-future-of-ai/. (Accessed on 13 February 2025).

and restrictive regulatory frameworks, however, since this may have a detrimental effect on the world's developing AI economy.[73] The emphasis seems to be on a cautious, experimental method of voluntary self-regulation following certain criteria established by the government, initially, and then becoming more interventionist if those first steps do not provide satisfying results.

To guarantee the safe, secure, and reliable development and use of AI in the United States, the White House issued an Executive Order at the end of October 2023 that outlined a complete strategy. Eight guiding principles and goals for AI governance were outlined by the decree. Safety, security, privacy, equality, civil rights, competitiveness, innovation, and global leadership are some of these. Additionally, the order requires several actions to be taken to track and evaluate how these principles are being applied and enforced. Safety testing and information exchange for the most potent AI systems, the creation of guidelines and instruments for assessing AI, safeguarding against the dangers of utilising AI to create hazardous biological materials, and the advancement of AI research and teaching are some of these tasks.[74] To guarantee that job searchers are aware that their applications would be examined by AI systems that will undergo independent auditing, New York City has also implemented new regulations for companies.[75] This discloses the usage of AI in government operations, hence reducing black box opacity.[76] In the USA, a Framework for AI Risk Management has also been accepted by the National Institute of Standards and Technology (NIST). Approaches that "increase the trustworthiness of AI systems [and] help foster the responsible design, development, deployment, and use of AI systems" are identified by this optional framework.[77] A Digital Platform Commission Act is also being considered by the US Congress in 2023 to supervise the rollout of digital platforms in the country.

On the other hand, the majority of Southeast Asian countries, including the UK, have so far chosen laissez-faire policies by extending

---

[73] Friedler Sorelle, Suresh Venkatasubramanian, and Alex Engler. "How California and other states are tackling AI legislation." (2023).

[74] White House. 2023. *Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.* Available at: https://www.whitehouse.gov/briefing-room/presidentialactions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-anduse-of-artificial-intelligence/. (Accessed on 13 February 2025).

[75] Lohr, S,. A Hiring Law Blazes a Path for A.I. Regulation. *New York Times,* 25 May 2023. New York. Available at: https://www.nytimes.com/2023/05/25/technology/ai-hiring-law-new-york.html?utm_source=substack&utm_medium=email. (Accessed on 13 February 2025).

[76] Wheeler, T., *The three challenges of AI regulation.* [2023] Washington DC: Brookings Institution. Available at: https://www.brookings.edu/articles/the-three-challenges-of-ai-regulation/?utm_ campaign=Center. (Accessed on 13 February 2025).

[77] NIST. 2023. *AI risk management framework.* National Institute of Standards and Technology. US Department of Commerce. Available at: https://www.nist.gov/itl/ai-risk-managementframework. (Accessed on 13 January 2024).

current technology laws to include artificial intelligence. To avoid impeding AI research shortly, the UK chose to temporarily halt potential AI legislation.[78] While India chose to pursue a more relaxed strategy with less government involvement, Japan created voluntary rules to control AI.[79] Except for Mainland China and South Korea, which adhere to rather stringent, top-down regulatory compliance measures, most other Southeast Asian nations are pursuing similar business-friendly laissez-faire approaches to AI regulation.[80] The Association of Southeast Asian Nations (ASEAN), which consists of ten countries, was also considering a draft voluntary guide to AI ethics and governance towards the end of 2023.[81]

A thorough examination and evaluation of AI regulation strategies in the Asia-Pacific area was put together by De Loitte.[82] Similar to Western nations, Taiwan[83], Singapore, and Australia encourage voluntary self-regulation, whereas mainland China, South Korea, Vietnam, and the Philippines implement more stringent, legally binding external regulations. Furthermore, certain nations—such as South Korea and Mainland China—are much farther along in the process of adoption and enforcement than others, such as Thailand and the Philippines.[84]

Together with the US government and major international technology businesses, EU authorities began working on a self-regulated voluntary draft AI Code of Conduct for AI corporations in June 2023 to begin the shift to a standardised international approach to regulation.[85] However, the EU passed a specific, legally binding AI Act at the end of

[78] UK. 2021. *National AI Strategy.* London: HM Government. Command Paper 525. Available at: https:// www.gov.uk/government/publications/national-ai-strategy. (Accessed on 13 February 2025).

[79] Japan. 2023. *Japan's Approach to AI Regulation and Its Impact on the 2023 G7 Presidency.* Washington, DC: Centre for Strategic and International Studies (CSIS). Available at: https:// www.csis.org/analysis/japans-approach-ai-regulation-and-its-impact-2023-g7-presidency. (Accessed on 13 February 2025).

[80] Mapp, M, Regulating Asia's Ai Ecosystem. *Irish Tech News*, 29 September, 2022. Available at: https://irishtechnews.ie/regulating-asias-ai-ecosystem/. (Accessed 13 January 2024).

[81] Potkin, F. and Mukerjee, S, Southeast Asia eyes hands-off AI rules, defying EU ambitions. *Reuters*. 11 October 2023. Available at: https://www.reuters.com/technology/southeast-asiaeyes-hands-off-ai-rules-defying-eu-ambitions-2023-10-11/. (Accessed on 13 February 2025).

[82] De Loitte., *Generative AI: Application and Regulation in Asia Pacific, [2024]* De Loitte Asia Pacific Centre for Regulatory Strategy. Available at: https://www2.deloitte.com/cn/en/pages/ financial-services/articles/generative-ai-application-and-regulation-in-apac.html. (Accessed 13 February 2025).

[83] Taiwan,*Cabinet approves draft guidelines for use of generative AI by Executive Yuan and its subordinate agencies [2024],* AI Taiwan. Available at: https://ai.taiwan.gov.tw/news/cabinet-approvesdraft-guidelines-for-use-of-generative-ai-by-executive-yuan-and-its-subordinate-agencie/. (Accessed on 13 February 2025)

[84] Ibid

[85] Zubas¸cu, F. 2023. *EU and US hatch transatlantic plan to rein in ChatGPT, [2023].* Available at: https:// sciencebusiness.net/news/AI/eu-and-us-hatch-transatlantic-plan-rein-chatgpt. (Accessed on 13 February 2025)

2023[86] that made AI applications subject to new standards. This might make it more difficult for digital entrepreneurs to start and expand successful AI companies. According to Hazards, the EU AI Act "uses a tiered structure." Unacceptable-risk AI applications would be prohibited, while high-risk uses in industries including banking, the legal system, and medical would be closely monitored. The use of chatbots and other low-risk applications would need disclosures.[87] Risk is based on the intended uses of AI products and more severe systemic hazards are governed more strictly.[88]

Additionally, unlike the US, the EU plans to partially outlaw biometric monitoring, including face recognition software currently used by law enforcement.[89] Non-compliance carries severe consequences. The EU AI Act is "the world's first comprehensive, horizontal and binding AI regulation that will not only be a game-changer in Europe but will likely significantly add to the global momentum to regulate AI across jurisdictions," according to tech regulation expert Anu Bradford, a law professor at Columbia University in New York. It gives the EU a unique opportunity to set the standard and demonstrate to the rest of the world that AI can be controlled and that democratic supervision can be applied to its advancement.[90] According to an evaluation of the EU AI Act published in the MIT Technology Review, it is "one of the world's most important developments in AI regulation"[91] and sets a global standard.[92] While most other experts on the subject concurred, they concluded that the success of the plan would depend on how it was carried out.[93] The AI Act, according

[86] EU. 2023. *AI Act.* Brussels: European Union. Available at: https://artificialintelligenceact.eu/. (Accessed 13 February 2025).
[87] Ibid
[88] Chan, K, *Europe agreed on world-leading AI rules. How do they work and will they affect people everywhere? [2023]* Available at: https://qz.com/europe-agreed-on-world-leading-ai-ruleshow-do-they-wo-1851089463?utm_source=email&utm_medium=Quartz_Daily_Brief_ Eu%E2%80%A6. (Accessed on 13 January 2024).
[89] Ibid
[90] Ibid
[91] Ryan-Mosley, T, Five big takeaways from Europe's AI Act. *MIT Technology Review*. 19 June 2023. Available at: https://www.technologyreview.com/2023/06/19/1075063/five-big-takeawaysfrom-europes-ai-act/?truid=4dc6f8238273ed16be3a7ba344a01130&u%E2%80%A6. (Accessed on 13 February 2025).
[92] Meaker, M, The EU Just Passed Sweeping New Rules to Regulate AI. *Wired.com,* 8 December 2022. Available at: https://www.wired.com/story/eu-ai-act/?bxid=5bd67bfe3f92a41245df2 d6d&cndid=47097893&esrc=HeaderAndFooter&source=Email_0_EDT_W%E2%80%A6. (Accessed on 13 February 2025).
[93] Atlantic Council. 2023b. *The EU made a deal on AI rules. But can regulators move at the speed of tech?.* Available at: https://www.atlanticcouncil.org/blogs/new-atlanticist/experts-react/expertsreact-the-eu-made-a-deal-on-ai-rules-but-can-regulators-move-at-the-speed-of-tech/?mkt_tok =NjU5LVdaWC0wNzUAAAGQCb%E2%80%A6. (Accessed on 13 February 2025).

to Chee et al.[94], does not go far enough to safeguard digital privacy and human rights, which has angered many powerful advocates for stronger protection of these rights.

However, the EU's 2108 General Data Protection Regulation (GDPR) has already established global norms for digital privacy and protection (EU 2018). For monitoring purposes, the policy governs the gathering and use of data, requiring access and express authorisation.[95] Nonetheless, France, Germany, and Italy are concerned about the Act's too stringent regulations. They choose the "softer" method of self-regulation so as not to impede AI's advancement and its possible benefits for their economy.[96] To better balance the creative development and deployment of AI with the regulation of its potential and actual negative effects, talks were being held in the EU at the time this article was written.[97]

Furthermore, a new artificial intelligence bill including human rights principles and regulations was released by the Brazilian government in May 2023. "The Bill takes a risk-based approach by classifying AI systems into different categories and establishes the creation of a new regulatory body to enforce the law," the bill states. In addition, it establishes a reporting requirement for major security issues and a protective framework of civil responsibility for AI system operators or suppliers.[98] AI procedures must be transparent, and its deployment in certain industries is rigorously controlled and given priority as high-risk applications. Frequent impact assessments "must take into account several factors about the artificial intelligence system, such as foreseeable and known risks, associated benefits, likelihood and gravity of negative outcomes, operational logic, conducted tests and evaluations, mitigation measures, training and awareness, transparency measures for the public,

[94] Chee, F., Coulter, M. and Mukherjee, S, *EU sets global standards with first major AI regulations.[2023]* Davos: WEF. Available at: https://www.weforum.org/agenda/2023/12/europe-landmark-airegulation-deal/. (Accessed on 13 February 2025).

[95] Schneider, I, Democratic Governance of Digital Platforms and Artificial Intelligence? Exploring Governance Models of China, the US, the EU and Mexico. *JeDEM.* 12(1):1–24, 2020. Available at: DOI:10.29379/jedem.v12i1.604. (Accessed on 13 February 2025).

[96] Satariano, A and Kang, C, 'How Nations Are Losing a Global Race to Tackle A.I.'s Harms'. *New York Times*. 6 December 2023. Available at: https://www.nytimes.com/2023/12/06/technology/ ai-regulation-policies.html?campaign_id=51&emc=edit_mbe_20231207&instance_id=109519&nl=morning-briefing%3A-europe-edition&regi_id=76467660&segment_id=151926&te=1&user_id=4dc6f8238273ed16be3a7ba344a01130. (Accessed on 13 February 2025).

[97] Ibid

[98] Access Partnership, *Brazil's New AI Bill: A Comprehensive Framework for Ethical and Responsible Use of AI Systems, [2023].* Available at: https://accesspartnership.com/access-alertbrazils-new-ai-bill-a-comprehensive-framework-for-ethical-and-responsible-use-of-aisystems/. (Accessed on 13 February 2025).

and others". AI products must also undergo routine quality control testing under the supervision of an impartial regulatory body.[99]

Whereas, in 2022, China became the first nation to enact complete mandatory regulations for its corporate and civil society sectors to govern artificial intelligence[100]. Three distinct methods are used, as Table 2 summarises. The first is a program designed to lessen the possibility of influencing user attitudes and behaviour. It includes stringent guidelines for confirming the accuracy of data used in AI processes intended for public consumption, transparency in the use of recommendation algorithms, and the option for users to not be included in such algorithms.[101] Focussing on the creation of measurement tools to guarantee the accuracy, reliability, and controllability of AI systems is a second strategy. According to Sheehan[102] and Mapp[103], the third strategy entails requiring role-players in this field to create a self-regulatory system of internal management of the development and application of AI systems. This system will take the form of a three-year roadmap and include a set of ethical principles that the players must adhere to.

Similar to those created by the US, EU, OECD, and UNESCO, these strategies have been converted into top-down, legally binding policies considerably earlier, most likely as a result of China's more straightforward, centralised decision-making process.[104] China has made significant investments in many types of technology capacity development so far, according to Brookings, which may help to explain this all-encompassing approach to technology regulation.[105] Chan[106] claims that "President Xi Jinping has also proposed a Global AI Governance Initiative, calling for an open and fair environment for AI development."

9. A lesson to Nigeria and other African Countries

In terms of modern technology, especially AI capabilities, and governance, African nations often lag much behind the rest of the globe, as previously described.[107] However, there are significant differences across African

[99] Ibid
[100] Ibid
[101] Ibid
[102] Matt Sheehan, *China's New AI Governance Initiatives Shouldn't Be Ignored.* Carnegie Endowment for International Peace [2023]. Available at: https://carnegieendowment.org/2022/01/04/china-s-newai-governance-initiatives-shouldn-t-be-ignored-pub-86127. (Accessed on 13 February 2025).
[103] Ibid
[104] Ibid
[105] Denford, J., Dawson, G. and Desouza, K, *A cluster analysis of national AI strategies.* Washington, DC: Brookings Institution, 13 December 2023. Available at: https://www.brookings.edu/ articles/a-cluster-analysis-of-national-ai-strategies/?utm_campaign=Governance. (Accessed on 13 February 2025).
[106] Ibid
[107] Wakunuma, K., Ogoh, G., Eke, D. and Akintoye, S. 2022. Responsible AI, SDGs, and AI Governance in Africa. Cunningham, M. and Cunningham, P. (Eds). *IST-Africa 2022*

nations in these characteristics. When it comes to several AI-related challenges, South Africa, Nigeria, Egypt, and Kenya have advanced the most so far (in decreasing order).[108]

In addition to offering several measures "...to maximise the benefits while reducing the risks associated with disruptive technological innovation," Signé[109] reviewed and evaluated the effects of Africa's 4IR on the continent. To acknowledge the many viewpoints and concerns at play, the significance of inclusive dialogues, diversity, and sector-specific risk methods were emphasised.[110] The notion that Western, Eastern, or African exceptionalism necessitates distinct strategies is disproved by the African Union's (AU) Malabo Convention on Cyber Security and Personal Data Protection (AU 2014), which further affirms these parallels. In addition to the need of unified regulation throughout the continent to effectively address technological hazards to data privacy and security, this agreement addresses comparable northern issues of technology regulation, including certain AI features.[111]

Also, it suggests regulations for national and AU data protection and cyber security monitoring bodies to oversee and safeguard data collection, processing, storage, usage, and security as well as e-commerce from an external perspective. Noncompliance will result in fines.[112] For the agreement to be binding, nevertheless, each African nation must ratify it and incorporate it into its domestic laws.[113] The protocol became effective in July 2023 after being approved by 15 AU member nations. Because of worries that it might conflict with its own information and communications technology laws, South Africa has not yet approved it. The 2014 AU convention may be incorporated into member nations' domestic legal systems using the framework provided by the 2022 AU Data Policy Framework. As is the case in the global north, the framework template thus specifically seeks to establish "a consolidated data environment and

Conference Proceedings. 1–13. IST-Africa Institute. Available at: www.IST-Africa.org/Conference2022. (Accessed on 13 February 2025).

[108] Diplo Foundation, *Stronger digital voices from Africa Building African digital foreign policy and diplomacy*, [2022] Geneva: Diplo Foundation. Available at: https://www.diplomacy.edu/resource/ report-stronger-digital-voices-from-africa/. (Accessed on 13 February 2025).

[109] Signé, L. 2023ba. *The future of the world is intelligent: Insights from the World Economic Forum's AI Governance Summit*. Brookings Commentary, 8 December 2023. Available at: https://www. brookings.edu/articles/the-future-of-the-world-is-intelligent-insights-from-the-world-economicforums-ai-governance-summit/?utm_ca%E2%80%A6. (Accessed on 13 February 2025).

[110] Signé, L. 2023b. *Africa's Fourth Industrial Revolution.* (Cambridge: Cambridge University Press, 2023). Available at: https://www.amazon.com/Africas-Fourth-Industrial-Revolution-Landry/dp/1009200011. (Accessed on 13 February 2025).

[111] AU, *Convention on Cyber Security and Personal Data Protection, [2014]* Addis Ababa: African Union. Available at: https://au.int/en/treaties/african-union-convention-cyber-security-and-personaldata-protection. (Accessed on 13 February 2025).

[112] Ibid

[113] Musoni, M. "Looking into the crystal ball: Artificial intelligence policy and regulation in Africa." *ECDPM Commentary. Maastricht: ECDPM* 18 (2023).

harmonised digital data governance systems to enable the free and secure flow of data across the continent while safeguarding human rights, upholding security, and ensuring equitable access and sharing of benefits".[114] "The broad principles of transparency, accountability of institutions and actors, the inclusion of stakeholders, equity among citizens, and fair competition among market players" also shape the framework.

The framework is guided by the following principles: non-discrimination, representativity, quality and integrity, security, accessibility, interoperability, and trust.[115] 18 African nations, however, still lack meaningful data protection legislation.[116] Developed by South Africa, Rwanda, Uganda, and GIZ, a Blueprint for AI in Africa was released in 2021.[117] In line with the African Charter on Human and Peoples' Rights[118], the paper was produced as a resource for the AU to construct a model African AI governance plan for the continent, which would include oversight of AI applications and hazards. This project is continuing. As part of its own domestic 4IR initiative, South Africa directs the creation of this model continental strategy and serves as the lead nation for this purpose.[119]

According to Musoni[120], the most developed African nations that either already have or are creating specific regulatory frameworks on AI are South Africa, Egypt, Rwanda, Mauritius, Kenya, Ghana, Ethiopia, Uganda, Tunisia, and Morocco. In terms of AI readiness, South Africa, Egypt, and Mauritius are the best.[121] Additionally, the economies of these nations are among the most developed in Africa. To improve technology governance in a variety of ad hoc methods, Kenya, Mauritius, Egypt, Rwanda, and Nigeria have already taken some action to put in place officially sanctioned policies, plans, or agencies that are reviewed and enforced by outside parties. The Diplo Foundation[122] notes that execution and enforcement of these policies have not been very successful so far. The AI regulations are still being considered in South Africa, Ghana, and Ethiopia. In many areas, they have gained considerable expertise and ability with cutting-edge technology, but they haven't done much to institutionalise their operations in a structured policy framework so far.

---

[114] Ibid
[115] Ibid
[116] Ibid
[117] Smart Africa, *Blueprint Artificial Intelligence for Africa, [2021].* Available at: https://smartafrica.org/ knowledge/artificial-intelligence-for-africa/. (Accessed on 13 February 2025).
[118] Ibid
[119] Ibid
[120] Ibid
[121] AI Media, *State of AI in Africa, 2022 Report: Baselining the 4IR in Africa – A foundation for growth.* Available at: https://aiafricareport.gumroad.com/l/State_of_AI_in_Africa_2022?layout=profile. (Accessed on 13 February 2025).
[122] Ibid

These and other African nations' development of high technology and artificial intelligence capabilities is also directly aided by multinational technology corporation.[123] The continent's most sophisticated technical capability is found in South Africa. Over the last five years, 4IR has gained significant attention; nevertheless, the South African government has yet to publicly create a national policy or plan for this function.[124] According to the summary and evaluation above, African nations, Nigeria inclusive, still have a long way to go before they can catch up to the leaders in AI governance and capability.

10. Recommendations

Comprehensive legislative changes and strong capacity-building programs are necessary to strengthen Nigeria's AI regulations. To start, the Data Protection Act 2023 should be amended to include AI-specific issues such algorithmic fairness, transparency, and responsibility. To ensure ethical AI usage across industries, clear rules for AI developers and users are essential. Enhancing technical knowledge and enforcement capacities should also be the top priority for regulatory organisations' capacity-building initiatives. To promote innovation and make sure that regulatory frameworks can adapt to new AI issues, cooperation between the public and commercial sectors is crucial. This all-encompassing strategy will guarantee responsible AI governance and sustainable growth in Nigeria.

11. Conclusion:

Organisations have several difficulties navigating Nigeria's complex regulatory environment, including resource constraints, bureaucratic roadblocks, and overlapping legislation. This study has provided insight into Nigeria's complex compliance landscape, highlighting the challenges and complexity that companies and regulatory agencies must overcome. Among these difficulties, a recurrent theme shows up: the revolutionary potential of technology and data-driven strategies to improve compliance initiatives. These answers provide optimism by shedding light on a way through the regulatory labyrinth. The study's conclusions highlight how crucial data-driven tactics are for removing compliance roadblocks and significantly enhancing regulatory adherence.

Nigeria's compliance environment necessitates creativity and flexibility due to its complexity and constant change. Data-driven solutions provide businesses a strong toolkit that allows them to automate operations, use data to make insightful decisions, and set up real-time monitoring systems. These developments enhance operational efficiency, reputation, cost savings, and compliance. Businesses have used data and technology to their advantage, addressing compliance issues head-on and

[123] Ibid
[124] Ibid

coming out stronger and more resilient. Making important investments in data infrastructure, resource allocation, and ethical data practices are all part of the success path.

In this process, cooperation with regulatory agencies, a dedication to data privacy compliance, and operational openness are essential. Regulators also play an important role. Encouraging data-sharing platforms, adopting RegTech solutions, guaranteeing openness, and upholding uniformity in enforcement all help create a more favourable compliance climate. Regulatory agencies should give priority to instructional programs and flexible rules to keep up with the rapidly changing technological landscape.

In summary, the study has shed light on Nigeria's compliance landscape's future. Adopting data-driven strategies may help organisations better manage risks and handle complicated laws, which will support corporate expansion and sustainability in a constantly changing environment. At the same time, authorities may improve enforcement and supervision by using data-driven technologies, which will promote a more open and legal corporate environment. In the end, these initiatives help companies, regulatory agencies, and society at large by paving the way for a day when compliance is not just a legal need but also a competitive advantage in Nigeria's thriving and dynamic economy.

References

A. Radford, K. Narasimhan, T. Salimans, I. Sutskever, Improving Language understanding by generative pre-training Homol. Homotopy Appl., 9 (1) (2018), pp. 399-438 <https://www.cs.ubc.ca/~amuham01/LING530/papers/radford2018improving.pdfGoogle Scholar> (last accessed 10 February 2025).

Access Partnership, *Brazil's New AI Bill: A Comprehensive Framework for Ethical and Responsible Use of AI Systems, [2023].* Available at: https://accesspartnership.com/access-alertbrazils-new-ai-bill-a-comprehensive-framework-for-ethical-and-responsible-use-of-aisystems/. (Accessed on 13 February 2025).

AI Media, *State of AI in Africa, 2022 Report: Baselining the 4IR in Africa – A foundation for growth.* Available at: https://aiafricareport.gumroad.com/l/State_of_AI_in_Africa_2022?layout=profile. (Accessed on 13 February 2025).

Atlantic Council. 2023b. *The EU made a deal on AI rules. But can regulators move at the speed of tech?.* Available at: https://www.atlanticcouncil.org/blogs/new-atlanticist/experts-react/expertsreact-the-eu-made-a-deal-on-ai-rules-but-can-regulators-move-at-the-speed-of-tech/?mkt_tok =NjU5LVdaWC0wNzUAAAGQCb%E2%80%A6. (Accessed on 13 February 2025).

AU, *Convention on Cyber Security and Personal Data Protection, [2014]* Addis Ababa: African Union. Available at: https://au.int/en/treaties/african-union-convention-cyber-security-and-personaldata-protection. (Accessed on 13 February 2025).

Bonadio and L McDonagh, "Artificial Intelligence as Producer and Consumer of Copyright Works: Evaluating the Consequences of Algorithmic Creativity" (2020) 2 Intellectual Property Quarterly 112

Chan, K, *Europe agreed on world-leading AI rules. How do they work and will they affect people everywhere? [2023]* Available at: https://qz.com/europe-agreed-on-world-leading-ai-ruleshow-do-they-wo-1851089463?utm_source=email&utm_medium=Quartz_Daily_Brief_Eu%E2%80%A6. (Accessed on 13 January 2024).

Chee, F., Coulter, M. and Mukherjee, S, *EU sets global standards with first major AI regulations.[2023]* Davos: WEF. Available at: https://www.weforum.org/agenda/2023/12/europe-landmark-airegulation-deal/. (Accessed on 13 February 2025).

D Eke and others (eds) Responsible AI in Africa: Challenges and opportunities (2023);
K Bala and others 'Artificial-intelligence-based models coupled with correspondence analysis visualisation on ART – Cases from Gombe State, Nigeria: A comparative study' (2023) 13 Life 715.

De Loitte., *Generative AI: Application and Regulation in Asia Pacific, [2024]* De Loitte Asia Pacific Centre for Regulatory Strategy. Available at: https://www2.deloitte.com/cn/en/pages/ financial-services/articles/generative-ai-application-and-regulation-in-apac.html. (Accessed 13 February 2025).

Deji Elumoye, "Osinbajo: Judiciary Needs to Embrace Technology, Innovation" *Thisday Nigerian Newspaper* (27 July 2021) < https://www.newsheadlines.com.ng/thisday-newspapers-headlines-news-today/2021/07/27/osinbajo-judiciary-needs-to-embrace-technology-innovation />\ Accessed 5 Feb. 25

Denford, J., Dawson, G. and Desouza, K, *A cluster analysis of national AI strategies.* Washington, DC: Brookings Institution, 13 December 2023. Available at: https://www.brookings.edu/ articles/a-cluster-analysis-of-national-ai-strategies/?utm_campaign=Governance. (Accessed on 13 February 2025).

Diplo Foundation, *Stronger digital voices from Africa Building African digital foreign policy and diplomacy*, [2022] Geneva: Diplo Foundation. Available at: https://www.diplomacy.edu/resource/ report-stronger-digital-voices-from-africa/. (Accessed on 13 February 2025).

Ebenibo, Lionel, Joy Onma Enyejo, George Addo, and Toyosi Motilola Olola. "Evaluating the Sufficiency of the data protection act 2023 in the age of Artificial Intelligence (AI): A comparative case study of Nigeria and the USA." *International Journal of Scholarly Research and Reviews,* [2024] 05 (01) 088 107.

EM Bender and A Koller, "Climbing towards NLU: On Meaning, Form, and Understanding in the Age of Data" in Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (Association for Computational Linguistics, Online, 2020) pp 5185–98 (defining the term "language model" as any system trained only on the task of string prediction, whether it operates over characters, words or sentences and sequentially or not).

Emma Okonji, "Enhancing Government Service Delivery with Technology" *Thisday Nigerian Newspaper* (14 October 2021) https://www.thisdaylive.com/index.php/2021/10/14/enhancing-government-service-delivery-with-technology/ Accessed 5 Feb. 25

EU. 2023. *AI Act.* Brussels: European Union. Available at: https://artificialintelligenceact.eu/. (Accessed 13 February 2025).

Friedler Sorelle, Suresh Venkatasubramanian, and Alex Engler. "How California and other states are tackling AI legislation." (2023).

garanteprivacy.it/home/docweb/-/docweb-display/docweb/9870847> (last accessed 10 February 2025).

J McCarthy 'What is AI/AI basics', http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html (accessed 5 February 2025).

Jake Effoduh Okechukwu. "Towards A rights-respecting artificial intelligence policy for Nigeria." *Paradigm Initiative (November 2021). <https://paradigmhq. org/wp-content/uploads/2021/11/Towards-A-Rights-Respecting-Artificial-Intelligence-Policy-for-Nigeria.pdf* > Accessed 5 February 2025.

Japan. 2023. *Japan's Approach to AI Regulation and Its Impact on the 2023 G7 Presidency.* Washington, DC: Centre for Strategic and International Studies (CSIS). Available at: https:// www.csis.org/analysis/japans-approach-ai-regulation-and-its-impact-2023-g7-presidency. (Accessed on 13 February 2025).

John Babikian, "Securing Rights: Legal Frameworks for Privacy and Data Protection in the Digital Era." *Law Research Journal* 1, no. 2 (2023): 91-101.

Kelvin Osa-Okunbor, "Deploying identity management for air travel - *The Nation Nigeria News"*, (July 29 2020), online: Latest Nigeria News, Nigerian News-papers, Politics <https://thenationonlineng.net/deploying-identity-management-for-air-travel/> Accessed 5 Feb. 25

Kunle Adebajo, "Abuja Airport Deploys AI Robots To Scan Passengers, Take Body Temperature", (28 June 2020), online: *HumAngle Magazine* <https://humangle.ng/abuja-airport-deploys-ai-robots-to-scan-passengers-take-body-temperature/> Accessed 5 Feb. 25

L Floridi, "AI as Agency without Intelligence: on Chat GPT, Large Language Models and Other Generative models" (2023) 36 Philosophy & Technology 1, 6

Lohr, S,. A Hiring Law Blazes a Path for A.I. Regulation. *New York Times,* 25 May 2023. New York. Available at: https://www.nytimes.com/2023/05/25/technology/ai-hiring-law-

new-york.html?utm_source=substack&utm_medium=email. (Accessed on 13 February 2025).

Mapp, M, Regulating Asia's Ai Ecosystem. *Irish Tech News*, 29 September, 2022. Available at: https://irishtechnews.ie/regulating-asias-ai-ecosystem/. (Accessed 13 January 2024).

Martha Onyeajuwa Kanene. "Critical Assessment of Institutional and Regulatory Frameworks for Personal Data Protection in Digital Platform ecosystem: a study of Nigeria" (22nd Biennial Conference of the International Telecommunications Society (ITS): "Beyond the Boundaries: Challenges for Business, Policy and Society", Seoul, Korea, 24th-27th June, 2018)

Matt Sheehan, *China's New AI Governance Initiatives Shouldn't Be Ignored.* Carnegie Endowment for International Peace [2023]. Available at: https://carnegieendowment.org/2022/01/04/china-s-newai-governance-initiatives-shouldn-t-be-ignored-pub-86127. (Accessed on 13 February 2025).

Meaker, M, The EU Just Passed Sweeping New Rules to Regulate AI. *Wired.com,* 8 December 2022. Available at: https://www.wired.com/story/eu-ai-act/?bxid=5bd67bfe3f92a41245df2d6d&cndid=47097893&esrc=HeaderAndFooter&source=Email_0_EDT_W%E2%80%A6. (Accessed on 13 February 2025).

Musoni, M. "Looking into the crystal ball: Artificial intelligence policy and regulation in Africa." *ECDPM Commentary. Maastricht: ECDPM* 18 (2023).

N Helberger and N Diakopoulos, "ChatGPT and the AI Act" (2023) 12 Internet Policy Review 10.14763/2023.1.1682.

NIST. 2023. *AI risk management framework.* National Institute of Standards and Technology. US Department of Commerce. Available at: https://www.nist.gov/itl/ai-risk-managementframework. (Accessed on 13 January 2024).

NITDA 'National data strategy draft' 2022, https://nitda.gov.ng/wp-content/uploads/2022/11/Final-Draft-National-Data-Strategy.pdf (accessed 30 March 2023).

Obidimma, Emmanuel Oc, and Richard Onyekachi Ishiguzo. "Artificial Intelligence and Cybercrime Investigation in Nigeria: Addressing the Legal And Technical Skills Gaps." *African Journal of Criminal Law And Jurisprudence* 8 (2023).

Potkin, F. and Mukerjee, S, Southeast Asia eyes hands-off AI rules, defying EU ambitions. *Reuters*. 11 October 2023. Available at: https://www.reuters.com/technology/southeast-asiaeyes-hands-off-ai-rules-defying-eu-ambitions-2023-10-11/. (Accessed on 13 February 2025).

R Abbot, The Reasonable Robot (Cambridge, Cambridge University Press 2020)

Russell, Stuart J., and Peter Norvig, 'Artificial intelligence: a modern approach'. (Pearson, 2016).

Ryan-Mosley, T, Five big takeaways from Europe's AI Act. *MIT Technology Review*. 19 June 2023. Available at: https://www.technologyreview.com/2023/06/19/1075063/five-big-takeawaysfrom-europes-ai-act/?truid=4dc6f8238273ed16be3a7ba344a01130&u%E2%80%A6. (Accessed on 13 February 2025).

Satariano, A and Kang, C, 'How Nations Are Losing a Global Race to Tackle A.I.'s Harms'. *New York Times*. 6 December 2023. Available at: https://www.nytimes.com/2023/12/06/technology/ ai-regulation-policies.html?campaign_id=51&emc=edit_mbe_20231207&instance_id=109519&nl=morning-briefing%3A-europe-edition&regi_id=76467660&segment_id=151926&te=1&user_id=4dc6f8238273ed16be3a7ba344a01130. (Accessed on 13 February 2025).

Schneider, I, Democratic Governance of Digital Platforms and Artificial Intelligence? Exploring Governance Models of China, the US, the EU and Mexico. *JeDEM.* 12(1):1–24, 2020. Available at: DOI:10.29379/jedem.v12i1.604. (Accessed on 13 February 2025).

Schumer, C., *Schumer Launches Major Effort to get ahead of Artificial Intelligence, (2023)* Washington, DC: US Senate. Available at: https://www.democrats.senate.gov/newsroom/press-releases/

schumer-launches-major-effort-to-get-ahead-of-artificial-intelligence. (Accessed on 13 February 2025).

Signé, L. 2023b. *Africa's Fourth Industrial Revolution.* (Cambridge: Cambridge University Press, 2023). Available at: https://www.amazon.com/Africas-Fourth-Industrial-Revolution-Landry/dp/1009200011. (Accessed on 13 February 2025).

Signé, L. 2023ba. *The future of the world is intelligent: Insights from the World Economic Forum's AI Governance Summit*. Brookings Commentary, 8 December 2023. Available at: https://www.brookings.edu/articles/the-future-of-the-world-is-intelligent-insights-from-the-world-economicforums-ai-governance-summit/?utm_ca%E2%80%A6. (Accessed on 13 February 2025).

Smart Africa, *Blueprint Artificial Intelligence for Africa, [2021].* Available at: https://smartafrica.org/ knowledge/artificial-intelligence-for-africa/. (Accessed on 13 February 2025).

Srnicek, Nick. "Value, rent and platform capitalism." *Work and labour relations in global platform capitalism*. Edward Elgar Publishing, 2021. 29-45.

Strickland, E, *The Who, Where, and How of Regulating AI*, (2023) Available at: https://spectrum. ieee.org/ai-regulation-worldwide. (Accessed on 13 February 2025).

Taiwan,*Cabinet approves draft guidelines for use of generative AI by Executive Yuan and its subordinate agencies [2024],* AI Taiwan. Available at: https://ai.taiwan.gov.tw/news/cabinet-approvesdraft-guidelines-for-use-of-generative-ai-by-executive-yuan-and-its-subordinate-agencie/. (Accessed on 13 February 2025)

Tim Dutton, "An overview of national aı strategies." *Erişim Tarihi: Nisan* 16 (2023).

UK. 2021. *National AI Strategy.* London: HM Government. Command Paper 525. Available at: https://www.gov.uk/government/publications/national-ai-strategy. (Accessed on 13 February 2025).

Wakunuma, K., Ogoh, G., Eke, D. and Akintoye, S. 2022. Responsible AI, SDGs, and AI Governance in Africa. Cunningham, M. and Cunningham, P. (Eds). *IST-Africa 2022 Conference Proceedings.* 1–13. IST-Africa Institute. Available at: www.IST-Africa.org/Conference2022. (Accessed on 13 February 2025).

Wheeler, T., *The three challenges of AI regulation.* [2023] Washington DC: Brookings Institution. Available at: https://www.brookings.edu/articles/the-three-challenges-of-ai-regulation/?utm_ campaign=Center. (Accessed on 13 February 2025).

White House. 2023. *Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.* Available at: https://www.whitehouse.gov/briefing-room/presidentialactions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-anduse-of-artificial-intelligence/. (Accessed on 13 February 2025).

Wyden, R.. *Wyden, Booker and Clarke Introduce Algorithmic Accountability Act of 2022 to Require New Transparency and Accountability for Automated Decision Systems, 2022* Washington, DC: US Senate. Available at: https://www.wyden.senate.gov/news/press-releases/wyden-bookerand-clarke-introduce-algorithmic-accountability-act-of-2022-to-require-new-transparencyand-accountability-for-automated-decision-systems. (Accessed on 13 February 2025).

Y Goldberg, Neural Network Methods for Natural Language Processing (Cham, Springer 2017) p 105; P Henderson et al, "Ethical Challenges in Data-Driven Dialogue Systems" (2018) Proceedings of the 2018 AAAI/ ACM Conference on AI, Ethics, and Society 123; CD Manning et al, An Introduction to Information Retrieval (Cambridge, Cambridge University Press 2008) p 238.

Zubas¸cu, F. 2023. *EU and US hatch transatlantic plan to rein in ChatGPT, [2023].* Available at: https:// sciencebusiness.net/news/AI/eu-and-us-hatch-transatlantic-plan-rein-chatgpt. (Accessed on 13 February 2025)