

AI Adoption in Nigeria: Policy Enforcement Gaps and Strategic Recommendations

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Abstract: *The rapid adoption of Artificial Intelligence (AI) across major sectors in Nigeria, including Fintech, Healthcare, Agriculture, and Manufacturing, is outpacing the country's capacity for comprehensive policy enforcement and governance. While Nigeria has established the National AI Strategy (NAIS) and relies heavily on the Nigeria Data Protection Act (NDPA) 2023 as its primary enforcement tool, significant limitations and structural gaps persist, such as pervasive algorithmic bias stemming from unrepresentative data, an acute lack of high-quality, localized, and linguistic datasets, and the absence of dedicated, comprehensive AI-specific legislation persist. Furthermore, limited high-performance computing (HPC) resources, inadequate funding, and a great technical skills deficit among regulators and the judiciary hinder effective oversight and enforcement. This paper details these enforcement gaps and proposes a set of targeted recommendations across Regulatory, Infrastructure, and Human Capital pillars, advocating for the enactment of a risk-based AI Act, dedicated funding for the regulator, and massive investment in localized data repositories and AI literacy to ensure responsible, ethical, and inclusive AI adoption in Nigeria*

Keywords—component; Artificial Intelligence (AI), AI Policy Enforcement, Nigeria Data Protection Act (NDPA).

1. INTRODUCTION

Artificial Intelligence (AI) has rapidly transitioned from an emerging technology to a core driver of innovation and productivity across multiple sectors of the Nigerian economy. From fintech and healthcare to agriculture, manufacturing, education, and security, AI-powered systems are increasingly used to automate processes, improve decision-making, enhance service delivery, and expand financial and social inclusion. Recent statistics indicate that over 90% of Nigerian businesses have adopted some form of AI, while individual usage continues to rise sharply due to the proliferation of mobile-based generative AI tools. This widespread adoption positions Nigeria as one of Africa's leading AI markets, with significant potential for economic growth, technological advancement, and sustainable development.

However, the pace of AI adoption in Nigeria has significantly outstripped the country's capacity for effective policy enforcement and governance. While the Federal Government has articulated a strategic vision through the National Artificial Intelligence Strategy (NAIS) and relies primarily on the Nigeria Data Protection Act (NDPA) 2023 as the principal legal instrument governing AI-related data processing, the existing regulatory framework remains fragmented and largely indirect. Critical enforcement gaps persist, including the absence of comprehensive AI-specific legislation, limited institutional authority, inadequate funding, insufficient technical expertise among regulators and the judiciary, and linguistically diverse datasets. These challenges exacerbate risks such as algorithmic bias, lack of transparency, privacy violations, misuse of AI-generated

content such as deepfakes, and unclear liability for AI-induced harm.

This paper examines the current state of AI adoption in Nigeria, analyzes the limitations and gaps in existing policy enforcement mechanisms, and situates Nigeria's approach within a broader global context by contrasting it with enforcement models in the European Union and the United States. It argues that without a coherent, risk-based, and enforceable AI governance framework supported by robust infrastructure and human capital development, Nigeria risks undermining the ethical, inclusive, and sustainable deployment of AI technologies. Consequently, the study proposes strategic recommendations across regulatory, infrastructure, and human-capital pillars aimed at strengthening AI policy enforcement, fostering public trust, and ensuring that AI adoption in Nigeria delivers equitable and long-term socio-economic benefits.

2. ADOPTION IN INDUSTRIES IN NIGERIA

2.1 Agriculture: AI enables smart farming systems in Nigeria's agricultural sector by predicting weather and soil conditions for better planting and harvesting decisions. AI-powered drones and sensors are also used to monitor crops, detect pests, and manage irrigation [1]. Companies like Hello Tractor use AI to connect farmers with tractor owners and optimize equipment use.

2.2 Oil and Gas Industry: In Nigeria's oil and gas sector, AI supports predictive maintenance of drilling equipment to prevent breakdowns, exploration and production optimization through data analysis of seismic and geological data, and enhances safety monitoring systems using AI to detect leaks or abnormal pressure levels [2]. Industries such as NNPC Ltd and partners are exploring AI-driven monitoring systems for pipeline security.

2.3 Education: AI contributes to improving learning through e-learning platforms that personalize lessons for students, AI-based assessments that analyze student performance and suggest improvements, and virtual tutors that provide 24-hour learning assistance. Examples of educational platforms that utilize AI is uLesson and Edves etc [3].

2.4 Manufacturing Industry: AI is used in Nigerian industries in automation of production lines, predictive maintenance, and quality control to increase efficiency, reduce downtime, and human error. Some Lagos-based manufacturing plants use AI for packaging inspection and process monitoring [4].

2.5 Transportation and Logistics: AI is used to improve logistics and transportation through route optimization for delivery services, predictive maintenance for vehicles, and smart traffic management systems in cities like Lagos and Abuja [5]. MAX.ng and GIG Logistics use AI to optimize delivery and mobility services.

2.6 Security and Surveillance: Private firms and government agencies use AI in facial recognition systems for access control and crime prevention, and smart surveillance cameras that detect unusual movements or security breaches for urban monitoring and traffic control [6].

2.7 Fintech and Financial Inclusion: AI has been instrumental in strengthening security in the Nigerian fintech sector, primarily by addressing its challenges. This is discussed in Table 1.

Table 1. Adoption of Ai in Fintech

AI Application	Company/Platform	Description & Impact
Credit Scoring	TechAdvance	Uses AI-powered lending platforms and non-traditional data (like mobile phone usage) to assess the creditworthiness of the previously unbanked population, enabling them to access micro-credit [7].

Fraud Detection	PayStack	Implements Machine Learning (ML) algorithms to analyze transaction patterns and detect suspicious activities, significantly reducing fraudulent transactions on their payment platform [8].
Customer Service	UBA Group (Leo)	UBA Deployed an AI chatbot, Leo, to handle routine customer inquiries and enable seamless financial transactions 24/7 [9].
E-Commerce and Retail	Jumia and Konga	AI is used to automate customer service, demand forecasting to manage inventory, and personalized product recommendations to enhance customer experience [10].

2.8 Healthcare and Diagnostics: AI is deployed to tackle the significant public health challenges in Nigeria, particularly in diagnostics, logistics, and drug quality. This is described in table 2 as follows

Table 2. AI Healthcare and Diagnostics in Nigeria

AI Application	Company/Initiative	Description & Impact
Drug Verification	RxAll	RxAll uses an AI-powered drug verification system to instantly identify and differentiate genuine medications from counterfeit drugs in the Nigerian market [11].
Medical Logistics	LifeBank	Lifebank utilizes AI algorithms to optimize blood delivery routes, reducing delivery times for essential medical supplies in urban areas and improving emergency response [12].
Infant Diagnostics	Ubenwa	Ubenwa is a locally developed app that uses AI to analyze a baby's cry

		(frequency and amplitude) to non-invasively detect birth asphyxia which can kill newborns under 10 seconds [13].
Preventive Care	mDoc (Kem)	Kem is an AI-powered chatbot that provides preventive care, health information, and continuous support for individuals managing chronic conditions, particularly benefiting those in remote areas [14].
Genomic Research	54gene	AI is employed for large-scale genomic analysis, building one of Africa's first biobanks to collect and analyze genetic samples to ensure healthcare research and drug development are relevant to African populations [15].

3. STATISTICS ON AI USE IN NIGERIA

- **AI Adoption by Businesses:** According to authors in reference [16], 93% of Nigerian companies have adopted AI. 31% of those companies say they are at an “advanced” stage of AI integration. 94% of those AI-adopting companies now have a dedicated privacy officer or team [17]. 40% of these organizations allocate more than 30% of their IT budget specifically to privacy protection, indicating that many are treating data governance seriously [18]. 69% of companies invest in data analysis skills, 53% in AI literacy, and 40% in prompt engineering to build internal capacity. 37% of companies cite a lack of technical expertise as a major barrier to AI adoption [16]. In Nigeria’s manufacturing sector, 40% of firms deploy AI to improve operational efficiency, 17% for cost reduction [19].

- **AI Use Among Individuals / Workers:** Reference [20] survey titled “*Our Life with AI: From Innovation to Application*” found that 70% of Nigeria’s online population have used generative AI. In the workplace, 93% of Nigerian AI users use it for work-related tasks. More specifically, 91% use it to write, 92% for problem-solving, 81% for studying long documents, 85% for digesting complex info [21]. The graph in Figure 1 visualizes business adoption, advanced tool usage, individual usage, startup ecosystem ranking, and broadband penetration in AI Nigeria. This is described in Fig. 1 as follows:

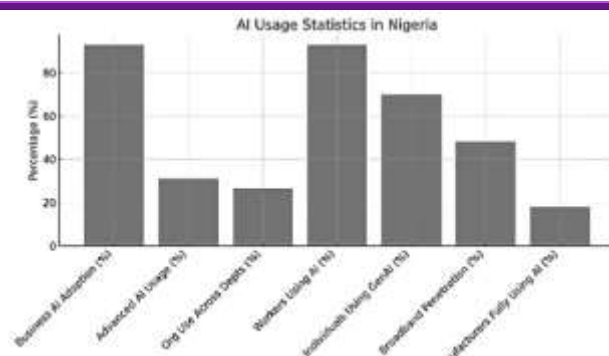


Fig. 1. AI Usage Statistics in Nigeria

Despite the fact that over 90% of businesses report using AI, despite high adoption, the lack of technical expertise is a recurring barrier, as there are those who tend to use advanced applications such as machine learning analytics, automation, and predictive systems. There is a stable and healthy rise in AI adoption as individual adoption increases due to mobile AI tools. This is illustrated in Fig. 2.

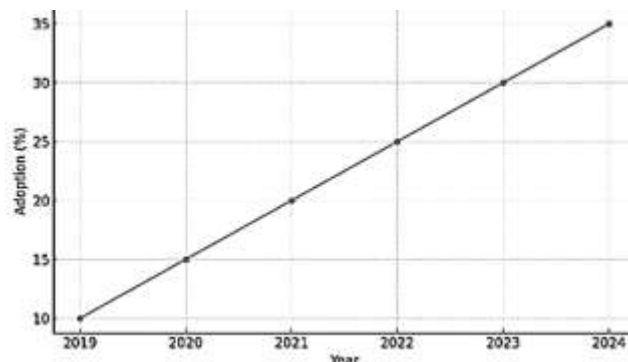


Fig. 2. Hypothetical Trend of AI in Nigeria (2019–2024)

4. GOVERNMENT STRATEGY AND REGULATION

The National Information Technology Development Agency (NITDA) and its subsidiary, the National Centre for Artificial Intelligence and Robotics (NCAIR), lead the development of the NAIS which aims to position Nigeria as the continent's leader in harnessing AI. It outlines Nigeria's strategic direction for AI deployment over the next five years.

4.1 Vision and Goals

The NAIS's vision is to be a global leader in AI, leveraging ethical and inclusive innovation to drive sustainable development. Its three main objectives enlisted in [22] are as follows:

- **Economic Growth and Competitiveness:** Using AI to enhance productivity, foster new industries, and attract foreign investment.
- **Social Development and Inclusion:** Leveraging AI to improve access to essential services (e.g., healthcare, education) and address social challenges

- Technological Advancement and Leadership: Building AI expertise and establishing Nigeria as a regional hub for AI development.

4.2 Five Strategic Pillars

Reference [23] states how the strategy is structured around five key pillars to achieve its objectives. This is stated as follows:

- Building Foundational AI Infrastructure: Focused on establishing affordable, high-performance computing (HPC) resources and clean energy AI clusters to support local development.
- Building and Sustaining a World-class AI Ecosystem: Emphasizing talent development, research, and collaboration among government, academia, and industry.
- Accelerating AI Adoption and Sector Transformation: Driving the use of AI in critical sectors like agriculture, finance, and health through industry-specific roadmaps.
- Ensuring Responsible and Ethical AI Development: Focusing on developing ethical frameworks, principles, and establishing an AI Ethics Commission to prevent bias and ensure human rights are protected.
- Developing a Robust AI Governance Framework: Creating clear regulatory structures to ensure transparency, accountability, and effective risk management.

4.1 Regulatory Framework

Though the NAIS is the policy roadmap, there are existing legislation such as the Nigeria Data Protection Act, and the proposed AI regulation bill which provides the legal basis for regulating AI operations, particularly concerning data usage and ethics.

4.4 Nigeria Data Protection Act (NDPA 2023)

The Nigerian Data Protection Act (NDPA) is the primary legislation governing AI in Nigeria, given that AI systems heavily rely on data processing. It mandates explicit consent and transparency, requiring organizations to inform individuals clearly about how their personal data is used in algorithmic decision-making. AI systems must adhere to data minimization principles, processing only the data necessary for their stated purposes. The law also enforces algorithmic accountability, granting individuals the right to object to automated decisions that significantly impact them, such as in credit scoring or hiring. Additionally, any cross-border transfer of Nigerian citizens' data must meet the NDPA's strict adequacy standards [24].

4.5 Proposed AI Regulation Bill (2023)

- A significant legislative development is a bill introduced in the National Assembly titled, "A Bill for an Act to Ensure Proper Control of Usage of Artificial Intelligence

(AI) Technology in Nigeria and for Related Matters, 2023 described in [25], comprises of the following:

- Mandatory Licensing: The bill proposes a stringent mandate that requires all developers, importers, and commercial users of AI systems to register and obtain a license from a proposed National Artificial Intelligence Council before deployment.
- Risk-Based Approach: High-risk applications (e.g., in healthcare, finance, security) would face closer scrutiny, requiring impact assessments, data transparency disclosures, and regular audits.
- Ethical Principles: It mandates that systems demonstrate safety, impartiality, and non-discrimination, ensuring they do not infringe upon human rights.

4.6 Institutional Framework

The policy implementation is managed by dedicated government agencies. While there is no primary, dedicated AI legislation yet, existing laws like the Nigeria Data Protection Act (NDPA 2023) indirectly govern AI systems by regulating data processing, which is crucial for most AI applications.

- National Centre for Artificial Intelligence and Robotics (NCAIR): Established in 2020, NCAIR is NITDA's special purpose vehicle for promoting research, development and capacity building in emerging technologies.²⁸ It focuses on building capacity, fostering innovation, and driving the practical application of AI across key sectors [26].

- NITDA: As the primary IT regulatory agency, NITDA is responsible for developing the overall policy and strategic roadmap for AI governance in the country.

5. AI POLICY ENFORCEMENT STRATEGIES IN NIGERIA

Nigeria's approach to AI policy enforcement is currently foundational and sector-specific, relying heavily on existing data protection laws and the non-binding directives of its newly launched National AI Strategy. This contrasts sharply with the comprehensive, legally-mandated frameworks in the EU and the market-driven, well-resourced approach of the US. Nigeria's enforcement strategy is anchored on two main pillars which are; institutional oversight and the application of existing data protection law.

5.1 Institutional and Policy Oversight

National Centre for Artificial Intelligence and Robotics (NCAIR) is the driver under the National Information Technology Development Agency (NITDA), mandated to drive AI research, development, and capacity building. Its enforcement role is primarily policy-based and focused on ensuring projects align with the principles outlined in the National AI Strategy (NAIS) [27]. This includes sector-specific guidelines, and ethical framework development.

- *Sector-Specific Guidelines*: these are enforcement guidelines for individual sectors via existing regulatory

bodies. For instance, the Central Bank of Nigeria (CBN) runs Regulatory Sandboxes for fintech, where AI solutions are tested under relaxed supervision before being deployed to the public. Enforcement in this context is about ensuring adherence to banking regulations [28].

- *Ethical Framework Development:* The NAIS emphasizes the development of an AI Ethics Assessment Framework and National AI Principles (like fairness and transparency) to guide developers. Enforcement here is currently more focused on self-regulation and governance standards rather than statutory compliance.

5.2 Legal Enforcement via Data Protection

Nigeria Data Protection Act (NDPA 2023): This is the most crucial enforcement tool. The Nigeria Data Protection Commission (NDPC) can impose fines and mandates based on how AI systems process personal data. The NDPA gives citizens the right to object to decisions based solely on automated processing (e.g., credit scoring) that significantly affects them, effectively creating a right to human review. The NDPC enforces the requirement for developers to demonstrate that such systems are fair, transparent, and accurate [29]. It also ensures AI training data is collected with explicit consent and only includes data necessary for the stated purpose [30].

6. LIMITATIONS TO AI POLICY ENFORCEMENT IN NIGERIA

Ethical Concerns and Algorithmic Bias: The primary ethical concerns in Nigeria revolve around the potential for AI systems to replicate or amplify existing societal biases due to unrepresentative training data [31].

Algorithmic Bias and Discrimination: AI models are often trained on global datasets that lack sufficient representation of Nigerian demographics, languages, and cultural norms. This can lead to models that perform poorly or, worse, make discriminatory decisions in local contexts [32]. For instance, facial recognition software has been shown in global studies to have higher error rates for people with darker skin tones, posing a significant risk of misidentification or wrongful arrests if deployed by law enforcement in Nigeria [33]. Also, AI-powered hiring or loan application tools trained on historically biased data may perpetuate systemic discrimination against candidates from certain ethnic groups or regions that were previously underrepresented [34].

Privacy and Surveillance: While the Nigeria Data Protection Act (NDPA 2023) provides a framework for data privacy, AI systems require massive amounts of personal data for training and deployment [35].

Lack of Transparency: Many AI systems operate as "black boxes," making it difficult to understand how decisions are reached (e.g., denying a loan or flagging a person). This lack of Explainable AI (XAI) undermines accountability and the right to due process [36]. Highlight author and affiliation lines of affiliation 1 and copy this selection.

Deepfakes and Misinformation: AI is already being used to create highly realistic deepfake videos and images, which pose a severe threat to democratic processes, election integrity, and social cohesion by enabling the rapid spread of misinformation and propaganda [37].

Societal and Cultural Alignment: AI deployment in sensitive areas like the legal system (e.g., customary law) requires careful balancing. AI must respect local traditions and cultural distinctions without overriding fundamental constitutional provisions like gender equality.

Linguistic and Contextual Data Gaps: Nigeria Local Languages are underrepresentation as most of the world's accessible, structured data is in English or other global languages. Nigeria has over 500 indigenous languages, but there is a severe shortage of curated datasets in languages like Hausa, Igbo, Yoruba, and Nigerian Pidgin. This prevents the development of effective, inclusive AI tools for a majority of the population.

Lack of Localized Data: Models trained on Western data often fail to understand local contexts from crop diseases unique to Nigerian soil to local slang or financial transaction norms leading to poor performance in critical sectors like agriculture and fintech [39].

Digital Divide: Limited broadband connectivity, insufficient data centers, and an unreliable power supply restrict the seamless collection, storage, and processing of the large data volumes needed for robust AI training [40].

Data Silos: Valuable data often resides within unharmonized silos across government agencies, institutions, and private companies, making it difficult for researchers and startups to access and use it to build AI solutions.

7. GAPS IN AI POLICY ENFORCEMENT IN NIGERIA

The enforcement of AI policy in Nigeria is constrained by multiple gaps relating to regulatory authority, legal frameworks, institutional capacity, and technical expertise. These gaps are discussed as follows;

7.1 Legal Gaps in enforcement authority and legislation

Lack of AI-specific laws: There is no comprehensive, dedicated AI legislation in Nigeria, which creates ambiguity in enforcement. Current laws like the Cybercrime Act and the Data Protection Act were not designed with AI's unique challenges in mind [41].

Unclear enforcement powers: there is no specific legal framework, therefore it is unclear which authority has the power to enforce AI-related regulations, what those powers are, and how they are to be applied [42].

Pace of technological advancement: author in reference [43] elucidated that the law is struggling to keep up with the rapid evolution of AI, leaving a regulatory void that is difficult to fill in a timely manner.

Gaps Contrast with US and Europe: Nigeria's strategies face significant gaps compared to the models in the US and Europe. Table 3 analyzed gaps in authority and legislation, while Table 4 analyzed the structural gaps.

Table 3. Gaps Contrast with US and Europe AI Enforcement Authority and Legislation

Gap Category	Nigeria's Situation	Contrast with US/EU
Legal Mandate	AI governance relies on the non-binding National AI Strategy and general laws (NDPA). There is no dedicated, enforceable AI Act. [44]	EU: Has the landmark, legally binding, risk-based EU AI Act with clear regulatory tiers, mandated audits, and specific enforcement bodies. [45] US: Enforces AI through existing agencies (FTC, DOJ) and state laws, backed by presidential executive orders and massive R&D funding.[46]
Technical Expertise	Lack of institutional capacity and technical expertise within the judiciary and administrative agencies to audit complex algorithms (the "black box" problem).[44]	US/EU: Regulatory bodies (e.g., EU's AI Office, US National Institute of Standards and Technology - NIST) are well-funded and staffed with specialized technical experts capable of algorithmic audits and setting technical standards.
Liability and Harm	Unclear liability for algorithmic harm. It is difficult to determine whether responsibility lies with the programmer, the operator, or the data provider when an AI system causes damages [47].	EU: Developing reforms to product liability and civil liability rules to explicitly cover AI-induced harm.

Table 4. Structural and Resource Limitations

Gaps	Impact on Enforcement	Contrast with US/EU
Funding and Budget	The NAIS lacks explicit budget lines or sustainable multi-year government funding, relying heavily on donor support and external partners [48].	US/EU: Commit billions of dollars in public funding for AI research, infrastructure, and capacity-building to complement regulatory efforts
Digital Infrastructure	Unreliable power supply, limited high-performance computing (HPC) resources, and low broadband penetration hinder the ability of regulators to collect, analyze, and monitor real-time data from deployed AI systems.	US/EU: Benefit from robust, stable power grids and highly developed cloud and data center infrastructure, facilitating continuous monitoring and complex AI development.
Data Scarcity/Bias	Nigeria lacks of high-quality, localized, diverse data results in biased AI models. Enforcement efforts to ensure "fairness" are constrained because the necessary non-biased training data and benchmarks often don't exist [49].	US/EU: Have vast, structured, and more easily accessible datasets, supported by long-standing data collection institutions, making bias auditing and remediation more feasible.

7.2 Gaps in knowledge and skills

Legislative and legal unfamiliarity: Lawmakers, legal practitioners, and judicial officials lack a deep understanding of how AI works, its implications, and its potential impacts. This makes it difficult to create and apply effective regulations [50].

Technical skills deficit: Law enforcement agencies and cybersecurity professionals face a skills gap in deploying and managing AI-driven tools and interpreting the data they produce [51].

Interpreting AI-generated evidence: A significant challenge exists in the admissibility and interpretation of AI-generated evidence in courts [51].

8. RECOMMENDATIONS TO STRENGTHEN NIGERIA'S AI POLICY ENFORCEMENT

The enforcement of Artificial Intelligence (AI) policy in Nigeria faces significant gaps, stemming from structural deficits and the rapid evolution of the technology. To address the main limitations and enforcement gaps in Nigeria's AI policy landscape, the NDPA/NAIS guidance, reports on enforcement practice, studies on capacity gaps and recent analysis were used to shape these suggestions discuss as follows:

8.1 Regulatory and Governance Recommendations

These focus on creating a clear, robust, and enforced legal framework for AI. This includes:

Enact AI-Specific Legislation: NDPA SHOULD Move beyond existing ancillary laws (NDPA, Cybercrime Act) to establish a comprehensive AI act that defines algorithmic transparency, bias prevention, accountability, and liability for high-risk ai applications.

Adopt a risk-based regulatory approach: Nigeria should mandate stricter compliance, audits, and pre-deployment testing for AI systems deployed in high-risk sectors (e.g., healthcare, financial services, law enforcement), while allowing low-risk AI to innovate with minimal friction.

Establish regulatory environment: A supervised, live-testing environments must be created where developers can test high-risk AI systems under the regulator's oversight before full deployment, fostering compliance through controlled innovation.

Define and fund the regulator: The sole AI Governance Regulatory Body should be clearly identified, and a significant budget for AI governance, compliance monitoring, and enforcement capacity should be dedicated.

8.2 Infrastructure and Data Recommendations

The following recommendations address the foundational constraints necessary for effective enforcement and development.

Invest in High-Performance Digital Infrastructure: Private and public investment in data centers, high-speed, reliable internet connectivity, and high-performance computing (HPC) resources should be prioritize to support the massive data needs of AI models.

Establish a Holistic Data Governance Framework: The Government should develop standardized data repositories

and enforce clear, interoperable data quality and sharing protocols for public sector data, ensuring strict adherence to the Nigeria Data Protection Act (NDPA) principles for AI training data.

Mandate Data Sovereignty and Localization: Policies that incentivize the storage and processing of sensitive Nigerian data within the country (e.g., building secure, government-owned data centers) should be developed to mitigate data security risks and foreign reliance.

8.3 Human Capital and Awareness Recommendations

The following recommendations should be employed to bridge the skill gaps and the need for public confidence and trust in AI systems.

Reform education for AI literacy: AI ethics, data science, and digital literacy may be integrated into the national curriculum at all levels (primary to tertiary) and provide incentives for AI-focused Continuous Professional Development (CPD) for civil servants and regulators.

Mandate Public AI Awareness and Disclosure: Public and private entities can be enforced to be transparent about where and how AI is used in decision-making that affects citizens (e.g., credit scoring, public service delivery).

Create a Public Redress Mechanism: a centralized, accessible national registry or portal for citizens to monitor, report, and seek redress for AI-related incidents, abuses, or misuse (e.g., algorithmic discrimination, deepfakes) should be established.

Foster Academia-Industry Collaboration: Funding joint research and development programs focused on solving local challenges using AI, creating a pipeline of relevant skills and locally contextualized, ethical AI solutions is essential

9. CONCLUSIONS

AI is already enabling smarter decision-making, enhanced productivity, and improved service delivery in Nigeria. This paper provides a comprehensive overview of Artificial Intelligence (AI) adoption, regulatory strategies, and significant policy enforcement challenges in Nigeria. It details the widespread integration of AI across major sectors, including Agriculture, Fintech, Healthcare, and Manufacturing, noting that 93% of Nigerian companies have adopted AI solutions. Government policy is guided by the National AI Strategy (NAIS), which is structured around five pillars aimed at economic growth, technological leadership, and ethical development. Legal enforcement currently rests on the Nigeria Data Protection Act (NDPA) 2023, which indirectly governs AI by imposing requirements like explicit consent, data minimization, and granting citizens the right to object to automated decisions.

However, this paper also highlights that the rapid adoption is significantly outpacing the country's capacity for

comprehensive governance. Crucially, there is a lack of dedicated, comprehensive AI-specific legislation, leading to unclear enforcement authority, undetermined liability for algorithmic harm, and a regulatory gap that existing laws cannot fully address. Furthermore, structural deficits, such as a technical skills deficit among regulators, inadequate funding, and limited High-Performance Computing (HPC) resources, hinder the ability to audit complex AI systems. This work was concluded by recommending the enactment of a risk-based AI Act, dedicated funding for the regulator, and investment in a public redress mechanism and AI literacy to ensure responsible and equitable AI use.

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