GHANA'S NATIONAL ARTIFICIAL INTELLIGENCE STRATEGY: A CRITICAL POLICY ANALYSIS ON BUILDING A SUSTAINABLE AI ECOSYSTEM

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Abstract

This policy analysis critically examines Ghana's National Artificial Intelligence Strategy, assessing its strengths, gaps, and alignment with global best practices. It highlights deficiencies in AI governance, ethical oversight, and data strategy while proposing policy recommendations for a sustainable AI ecosystem. The study underscores the need for robust regulatory frameworks and local AI capacity-building to ensure responsible and inclusive AI development.

1. Introduction: Ghana's Strategic AI Ambitions

In October 2022, Ghana concluded the drafting of its National Artificial Intelligence (AI) Strategy, the document provides the country's strategic direction spanning from 2023 to 2033, without any shred of doubt, it aims to position the country as a leader in AI innovation on the African continent. The undertakings weighs in on the government's recognition of AI as an influential tool for economic transformation, improving governance efficiency, and societal advancement generally. Developed by the Ministry of Communications and Digitalisation in collaboration with Smart Africa, German Agency for International Cooperation (GIZ), FAIR Forward, and The Future Society, the strategy defines a roadmap focusing on AI education, digital inclusion, data governance, and sectoral adoption through its eight (8) pillars (*download*

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a copy at https://www.aipolicy.africa/national-strategies/32da1df4-973e-49c8-95fa-ab41c132515c).

Notwithstanding its enthusiastic vision, the strategy is bereft of some crucial elements necessary for trustworthy AI development and deployment. While it highlights AI's transformative potential, it falls short in vital policy areas highly recognised in contemproary AI development; areas such as regulatory guardrails, ethical AI governance, and a comprehensive data strategy. The absence of robust mechanisms to mitigate AI-related risks, coupled with an over-reliance on international collaboration without a structured plan for domestic capacity-building, raises concerns about the strategy's long-term sustainability. This article critically examines Ghana's AI Strategy against global best practices, addressing its strengths, gaps, and areas requiring urgent reform.

2. Strengths of the National AI Strategy

The strategy dispenses several laudable aspects that align with international AI policy frameworks. One of its strongest attributes is its commitment to AI leadership and socioeconomic transformation. Most importantly, the document enunciates a vision of an "AI-powered society" by 2033, emphasizing AI's role in nurturing inclusive economic growth, job creation, and country's competitiveness in the global digital economy. This vision aligns with AI strategies implemented in leading economies, such as Singapore and Canada, where municipal AI policies have been consciously outlined to drive technological advancement while ensuring equitable access to AI-driven opportunities (OECD, 2021).

The strategy further demonstrates a adherence to multi-sectoral engagement, recognizing the importance of collaboration among government agencies, academia, private enterprises, and civil society. This approach exhibits international best practices, as successful AI ecosystems require diversity among stakeholders to promote innovation, ensure regulatory compliance, and proactively deal with ethical concerns (European Commission, 2022).

A commendable proposal within the strategy is the establishment of the Responsible AI Office (RAI Office). The RAI which is typically modeled after similar institutions in Singapore, and the UK, this office is anticipated as an oversight body to oversee AI governance, coordinate policy implementation, and monitor AI the adoption across various sectors. If this

body is well-resourced and independent, the RAI Office could play a pivotal role in shaping AI development in Ghana.

However, the strategy does not provide sufficient details on how this office will be structured, resourced, or given enforcement powers, leaving uncertainties regarding its effectiveness. This may be in pursuit of the scope of work for the development of the strategy, it noted that for such a crucial oversight, the structure and potential resources should have been forecasted at the minimum; guided by the history of how oversight bodies struggle with resource allocation in Ghana.

3. Absence of Ethical Guardrails and Weak AI Governance

A critical limitation of Ghana's AI Strategy is the lack of a clear legal and regulatory framework to govern AI deployment, this article acknowledges that Ghana could leverage legal regime on the law of electronic agents, extensively provided for under the country's Electronic Transactions Act 2008 (Act 772) and also its Data Protection Act 2012 (Act 843) for the purposes of data privacy and protection, however this is not adequate to deal with some of the specific nuances at AI development and deployment presents. The strategy did not miss the opportunity to acknowledge AI risks, including bias, discrimination, and misinformation, but it does not outline distinct and tangible governance structure to address issues that will emanate from the risks enumerated. In contrast, the European Union's AI Act has established a comprehensive legal framework that categorizes AI applications based on risk levels and mandates strict compliance requirements for high-risk AI systems (European Parliament, 2023). Ghana's strategy lacks similar mechanisms to ensure that AI applications adhere to ethical standards and human rights principles, at the least the strategy should have provided for a legal instrument or national guidelines as part of its pillars.

Additionally, the document does not establish an AI Ethics and Oversight Board to regulate AI use in sensitive sectors such as law enforcement, finance, and healthcare. Without independent oversight, AI applications may inadvertently reinforce biases, leading to unfair treatment of marginalized populations. Studies have shown that AI systems trained on biased datasets can perpetuate discrimination in hiring, credit scoring, and public service delivery (Barocas, Hardt, & Narayanan, 2019). The non-existence of regulatory safeguards inadvertently escalates the risk of deploying AI systems that are opaque, unaccountable, and

potentially harmful. Addressing AI risk is an endeavor that any present day strategy must address.

Another area of concern is the lack of provisions to regulate AI-driven surveillance and misinformation. In many parts of the world, AI has been misused to spread false narratives, manipulate elections, and conduct mass surveillance with little oversight. Canada and the United States have enacted AI accountability frameworks that subject government use of AI to transparency and audit requirements (Government of Canada, 2023). Ghana's AI Strategy does not address these concerns, leaving room for potential AI misuse in governance, media, and law enforcement.

4. Fragmented and Insufficient National Data Strategy

At the core of the AI revolution is data. Data train machine learning models and shape the outputs of AI systems in ways that directly impact human lives. To build safe and effective AI systems, the data that feed AI must be high-quality and reliable(Data Foundation). Surprisely unlike its Rwadan counterpart on the subjectmatter, Ghana's strategy lacks a robust national data governance framework. While the document mentions initiatives such as the Ghana Open Data Initiative (GODI) and the Ghana Data Exchange Hub, it fails to outline a clear roadmap for ensuring data quality, accessibility, and security. A well-structured data governance framework should establish protocols for data interoperability, privacy protection, and ethical data usage (European Commission, 2022).

A major issue in Ghana's data ecosystem is the existence of siloed data across government agencies, making it extremely challenging to develop AI applications that require cross-sectoral data integration. The strategy does not contain a vivid action plan for breaking down these silos and creating standardized data-sharing mechanisms. Additionally, compliance with global data protection regulations such as the General Data Protection Regulation (GDPR) remains weak, exposing Ghana's AI ecosystem to potential privacy violations, this means the strategy could have drawn from global experience and proposed an adequacy route or potential privacy shields that encourages privacy-compliant development and deployment of AI in Ghana. AI-driven applications in healthcare, finance, and public services require stringent data protection measures to prevent unauthorized access and data exploitation (Tene & Polonetsky, 2013).

Without a logical and consistent data governance strategy toward addressing the ultimate gains of AI, Ghana risks building an AI ecosystem that lacks transparency, accountability, and fairness. A more comprehensive approach would include establishing an AI data governance office under the joint-authorities of the country's Data Protection Commission and the National Information Technology Agency to oversee AI data practices, mandating data privacy impact assessments, and investing in secure AI-ready data repositories.

5. Failure to Address AI Risks and Algorithmic Accountability

As earlier mentioned, the strategy acknowledges AI risks, but then again it misses another opportunity to propose definite risk mitigation measures crucially needed in this time of AI development surge. Best practices in AI governance emphasize the prominence of algorithmic fairness testing, bias audits, and explainability standards to ensure AI systems operate transparently and equitably (Binns, 2018). Ghana's strategy however does not emphatically address the need to implement these safeguards, which raises concerns about the potential deployment of flawed AI models that reinforce existing inequalities.

Moreover, the strategy lacks provisions that highlights the need for AI risk assessments before deploying AI solutions in critical sectors, these structures are not very clear per the pillars of the strategy document. Many countries require AI developers to conduct impact assessments that evaluate potential risks before implementation (European Commission, 2022). Without such assessments, Ghana risks deploying AI systems that may cause unintended harm, particularly in areas like law enforcement, financial services, and social welfare programs.

6. Over-Reliance on International Collaboration Without Domestic AI Capacity Building

The strategy relies heavily on international partnerships with companies like Google, NVIDIA, and Smart Africa but does not prioritize domestic AI capacity-building. While global collaboration is essential, a sustainable AI ecosystem requires local research, innovation, and infrastructure investment. Countries such as China and the United States have invested heavily in national AI research institutes and high-performance computing infrastructure to drive local AI development (Feldstein, 2019).

Ghana lacks a national AI innovation fund to support homegrown startups and researchers. Without financial incentives and infrastructure investment, the country risks remaining a consumer of AI technologies rather than a creator. A more balanced approach would involve establishing AI research hubs, funding AI startup incubators, and promoting public-private partnerships that prioritize local talent development.

7. Conclusion

Ghana's AI Strategy provides a strong foundation for AI development but requires substantial improvements to align with international best practices. Key areas that need urgent reform include the formation of a robust AI regulatory framework, the development of a comprehensive national data governance strategy, the implementation of AI risk mitigation measures, and increased investment in domestic AI capacity-building. If these critical gaps are addressed, Ghana has the potential to emerge as a leader in ethical and sustainable AI adoption in Africa.

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