
RESPONSIBLE ARTIFICIAL INTELLIGENCE POLICIES AND REGULATIONS IN AFRICA: THE GAPS AND A WAY FORWARD

A Policy Brief

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Responsible Artificial Intelligence Policies and Regulations in Africa: The gaps and a way forward

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Introduction

The demography that will have the longest experience with artificial intelligence in Africa is the younger generation. This is because artificial intelligence has gained ground in Africa as the next emerging technology in the digital space. It, therefore, follows that one of the questions emerging is whether Africa is ready in terms of policy infrastructure to dive into the world of artificial intelligence for the benefit of its population. With this in mind, understanding the policy intervention ecosystem would be an important undertaking even as artificial intelligence interventions continue to be a platform to offer solutions to the African continent. There is a need for evidence that informs policy development and deployment strategies toward the successful development of responsible artificial intelligence that is regulated and acceptable by the intended recipients. Consequently, this research serves as an important contributor to the already existing conversation on responsible artificial intelligence both within Africa and beyond. This research adopted exploratory research.

This policy brief contributes to current discussions regarding the incorporation of responsible AI in the development, deployment, and consumption of artificial intelligence through policy interventions.

Methodology

An exploratory approach was adopted in this study which was undertaken as follows:

- **700** AI policy initiatives from **60** countries were explored as extracted from the OECD AI Policy Observatory¹ and a comparison was made with the ICT policy database that constitutes **1189** documents categorised as Law documents (**904**), Analysis documents (**77**), and Case Law documents (**148**),
- The individual policies and initiatives were then analysed to establish the extent to which the policy and interventions address the question of responsible AI.

The OECD database² on artificial intelligence initiatives by countries was a candidate based on its comprehensive coverage of content perceived to be addressing aspects of AI. The individual policy interventions were also reviewed to shed insights on how countries in Africa have incorporated components of responsible AI or lack thereof. Several key informant interviews were also conducted to seek views on best practices that can be adopted in furtherance of responsible AI in Africa.

To have a deeper understanding of the policy landscape and how Africa has initiated policies that cover the artificial intelligence agenda, we explored the ICT policy database³ by using the “Artificial Intelligence” keyword to extract policy documents with mentions of artificial intelligence.

¹ <https://oecd.ai/en/dashboards>

² <https://oecd.ai/en/dashboards>

³ <https://ictpolicyafrica.org/>

For interviews and micro-ethnography and micro-ethnography, our population sample was limited to Kenya's AI ecosystem which included the developers and consumers of AI products.

Findings

The evidence from the two questions that this research sought suggests that a lot still needs to be done to bring Africa's AI policy initiative toward responsible AI. OECD database shows that only five out of the fifty-four (54) countries in Africa today have initiative(s) that in one way or another are associated with artificial intelligence. As seen in Figure 1, Tunisia leads the pack followed closely by Egypt with a total of eight and seven initiatives respectively. Kenya follows with a total of 6 initiatives with Morocco and South Africa following with four and three initiatives respectively.

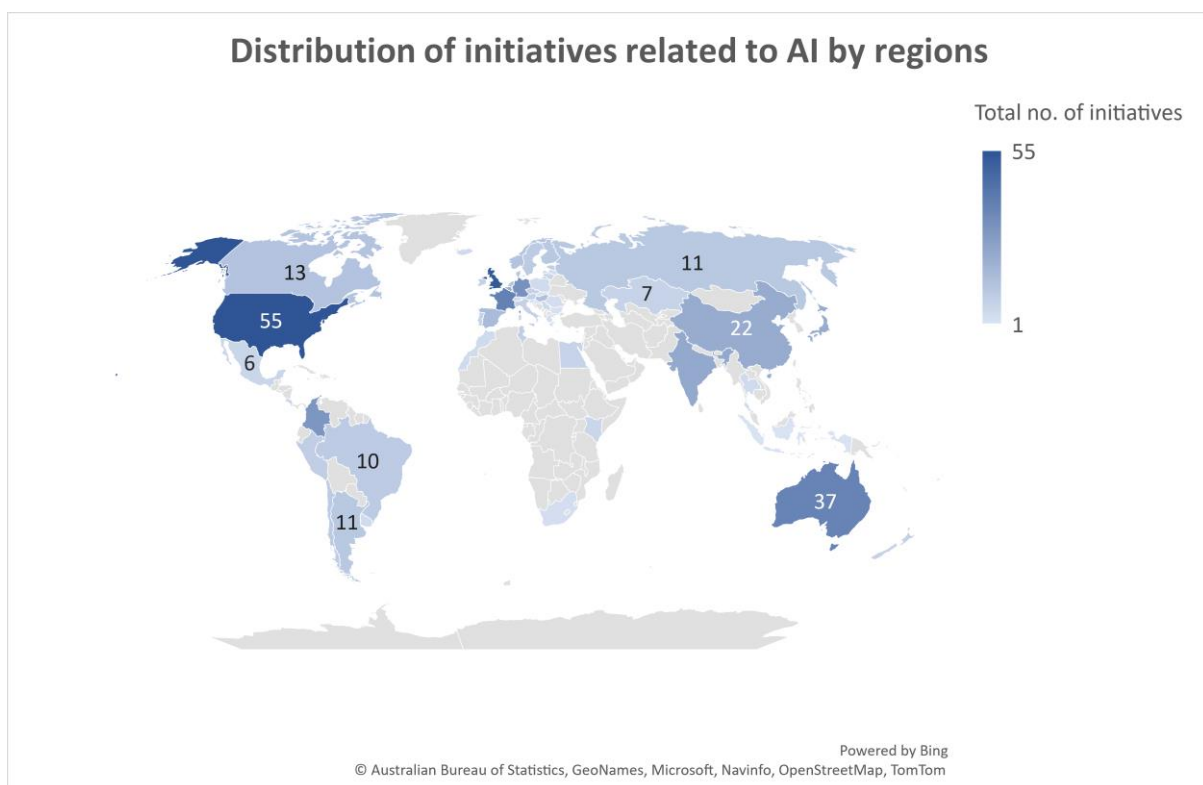


Figure 1: Illustrative map showing the distribution of initiatives related to AI by regions with Tunisia having 9 initiatives, Egypt (7) initiatives, Kenya (6) initiatives, Morocco (4) initiatives, and South Africa (3) initiatives against countries in other regions.

The findings from Africa's database on ICT policy also show a landscape that is starved of policies that address issues to do with artificial intelligence let alone the responsible components of AI. An in-depth search and analysis of the ICT database revealed that only two countries have policies that have mentioned artificial intelligence such as Kenya through National Information, Communications and Technology (ICT) Policy⁴ and Cape Verde through its working paper on the digital economy⁵ on Lab for harnessing disrupting technologies (e.g., Internet of Things,

⁴ [The Kenya National Information, Communications and Technology \(ICT\) Policy](#)

⁵ [Cape Verde's working paper on digital economy](#)

Blockchain, and Artificial Intelligence) in support of these industries. An incentive for start-ups, and data-driven businesses.

A cross-cutting engagement with the developers and other stakeholders also revealed that there is still a misunderstanding on how to classify artificial intelligence products as opposed to conventional ICT-related interventions. There was no clear consensus on what constitutes AI and how to derive “Responsible AI” principles. This made it difficult to have a meaningful discussion over the state of responsible AI among developers who apply algorithms and users who consume these AI products. One thing that came out was the need to have capacity-building initiatives around AI in general complemented with governing of responsible AI principles. The findings show that artificial intelligence is still a pristine concept to many consumers and developers among those who were interviewed.

Capacity development to enable responsible AI pedagogy in learning institutions emerged as a necessary intervention to provide the knowledge base for upcoming AI developers to drive the responsible AI agenda in the long term.

Recalibration of the contextual meaning of the term “Responsible AI” to have a paradigm shift from putting a burden on algorithms to putting the responsibility on the human aspect of AI.

Discussion

Africa still lags in aspects of creating an enabling environment for a responsible AI ecosystem in terms of initiatives and policy interventions that provide for financial support, AI enablers and other incentives, Governance, and Guidance and regulation.

Financial support

Out of the 268 policy instruments that address the aspect of financial support, Africa only has two countries Morocco and Tunisia with two initiatives each under this dimension. Strong and sustainable financial support is critical to establishing a responsible AI ecosystem, especially funding for research and grants for research. In these two dimensions, only Tunisia and Morocco feature with each country having initiatives to provide funds for research. While the initiatives do not speak directly to responsible AI, it is a good sign that research institutions are funded and grants are available for research in the public institutions.

AI enablers and other incentives

An enabling environment and incentives that promote the growth of AI and ensure an ethical and responsible ecosystem are critical for the sustainable governance of AI. This dimension is documented to feature Kenya and Tunisia under the AI skills and education dimension which has 30 initiatives in total. Tunisia also features in the Public awareness campaign and civil participation activities which collectively has 55 initiatives in total while Egypt is documented to feature in the AI computing and research infrastructure dimension that has a total of 54 initiatives. Under the Networking and collaborative platform dimensions that have 117 initiatives, we have Egypt and Tunisia also featuring in the Science and innovation challenges prizes and

awards that has a total of 37 initiatives. While it is commendable to have a few countries in Africa featuring in this dimension, it is equally concerning that other countries in Africa are yet to develop or put in place environments that can foster AI enabling environment and incentives that would eventually provide for creating a responsible AI ecosystem. The worrying fact is also seen in the number of total initiatives globally as compared to only seven initiatives in three countries.

Governance

It is the governing pillar that ensures that principles are adhered to. Therefore, it follows that countries that have a semblance of governance initiatives would be heading in the right direction. OECD database documents a total of 517 policy instruments and initiatives with Africa featuring in different dimensions. In the national strategies, agenda, and plans dimension that has a total of 251 initiatives, we see Egypt, Kenya, and Morocco as the only African countries being documented to have initiatives. The AI coordination and/or monitoring bodies dimension on the other hand shows 41 initiatives in total featuring Egypt and Kenya. Egypt and South Africa also feature in the public consultations of stakeholders or expert dimension that totals 138 initiatives while Kenya and Tunisia feature in the AI use in the public sector dimension which has documented 87 initiatives. From the governance pillar, we see that there are quite several countries in Africa.

Guidance and regulation

The guidance and regulation pillar also constitutes a critical pillar for a responsible AI ecosystem. Combined with the Governance pillar and by financial support and AI enablers and incentives, it is our submission that guidance and regulations form a key input towards establishing and sustaining an AI ecosystem that is driven by ethical considerations and places responsibility where it should be. Therefore, we submit that the findings show Africa being weak in this pillar. This is because out of the 266 policy instruments and initiatives, only Tunisia and Egypt have in place initiatives that fall in the emerging AI-related regulations that have 176 documented initiatives, while Tunisia, Egypt, and South Africa feature in countries that have initiatives falling under the regulatory oversight and ethical advice bodies. This shows that under the dimensions that directly involve an ethical and responsible AI ecosystem, African countries do not do well.

What the findings imply is that there is still an existential gap on how to address responsible AI questions in Africa. By analyzing the few existing initiatives that have been deemed to be aligned with artificial intelligence, we find that due to unclear mention of artificial intelligence in any way, there is a potential risk of overlooking responsible AI in the policy development phase. This, therefore, implies that the policy interventions need to be further strengthened so that artificial intelligence is aligned with the core definitions and provisions of the policy content. There is a lack of tangible policy and regulations that are aimed at providing a framework for responsible AI interventions in Kenya and Africa as a whole.

The lack of clear regulative frameworks in Africa also points to a need to evaluate individual countries' policies and regulative ecosystems and identify gaps that need

addressing towards a responsible AI ecosystem. The findings mirror what was already identified by (Kabubu, 2021) in which the author highlighted the insufficient legislative strategies covering AI in Kenya.

To reach the level of initiatives towards guaranteeing responsible AI, African countries need to increase their rate of initiating AI policy and regulative frameworks, particularly those addressing responsible AI. To buttress this, there needs to be a strong research framework and initiatives to build capacity and inform the stakeholders on areas of interest so that opportunities to develop these policies and regulative frameworks can be optimized. The findings also point to a deficiency in funding for research and development which is key to any meaningful policy development based on evidence. Governance and regulatory frameworks are key to setting the pace while AI enabling environment and incentives coupled with finance muscle would provide the prerequisite to a revolving wheel of governance and regulatory strategies.

Conclusion and recommendations

Available evidence portrays a deficiency in the policy and regulatory environment that can enable a robust responsible artificial intelligence ecosystem. Secondly, the few existing policy and strategic initiatives have not done justice to the quest to have a sustainable regulative and policy intervention that can ensure that Africa's population, which is considered young and, in the majority, does not get caught in the unregulated environment of the artificial intelligence ecosystem. The unclear understanding of what constitutes an AI policy initiative, or a regulative framework portends a challenge in addressing the responsible AI ecosystem.

Emerging questions

The pertinent question that emerges from this study and which would provide and premise for future areas of inquiry include questions such as: to whom should the responsibility be vested to ensure ethical standards of AI are acted on responsibly. Should the developer be obligated to bear the responsibility that is expected of artificial intelligence? Should the responsibility be placed on the algorithms that provide solutions to the users? Should responsibility be placed on the deployment platform to ensure AI does what it should and not what it should not? Should responsibility be placed on the enforcement agencies? Should responsibility be placed on sound policy and the generators of such policies?

There is a deficiency in strategic policies that address the responsibility aspect of AI. There is, therefore, a need for an elaborate and structured evaluation of the regulative ecosystem focusing on responsible AI across stakeholders within African countries.

A working framework on where responsibility should be based is needed that concretely specifies how AI should be governed through obligating responsibility to the developers, at the algorithm level, with the regulator, or a combination of actors and stakeholders.

Recommendations

- For a strong evidence-driven policy and regulative environment that supports the responsible artificial intelligence agenda, we recommend that financial support system, enabling environment, governing structures, and regulative platforms be established with a focus on defining where responsibility should be placed starting from conception, development, deployment, and consumption of artificial intelligence solutions.
- We recommend that further studies should delve into Country level stalk taking of the available policies, initiatives, and regulative framework in a bid to assess the efficacy of these initiatives in addressing responsible and ethical AI.
- We also recommend future studies can consider building a theoretical model for responsible AI in Africa. An AI framework that takes into consideration the African young population and growing digital space would provide a platform for responsive policies and regulative agenda toward responsible artificial intelligence.

References

- CIPIT. (n.d.). *The Centre for Intellectual Property and Information Technology Law (CIPIT)*. Retrieved from ICT Policy Africa: <https://ictpolicyafrica.org/en/page/tt599ms931e>
- Kabubu, J. (2021, January 26). *Artificial Intelligence (AI) in Kenya*. Retrieved from MMAN: <https://mman.co.ke/content/artificial-intelligence-ai-kenya>
- OECD.AI. (2021). *Database of national AI policies*. Retrieved from Powered by EC/OECD (2021): <https://oecd.ai/>