

# Regulating AI in Africa

Policy Brief

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## 1 Introduction

Like its cousins or other types of information technologies, Artificial Intelligence (AI) is branded as having the potential to help combat poverty, unemployment, and a host of other social and economic challenges in Africa. And like other information technologies, bold predictions are being made of AI's impact on the continent. For example, in one article<sup>1</sup>, it is claimed that AI could expand Africa's economy by US\$1.5 trillion by 2030. Whether such daring predictions are correct or not, we cannot deny the fact that AI adoption in Africa continues to grow rapidly, with more than 2,400 AI organisations operating across the continent<sup>2</sup> today, despite widely discussed downsides of the technology such as entrenched biases, its use in lethal autonomous weapons (LAWs), mass surveillance and infringement on human rights.

With this rapid adoption, yet known downsides and risks of AI, what African states are doing to govern the technology and how they are doing it becomes very important. AI regulations or laws that are or will be developed must take into consideration local realities of African communities.

## 2 AI Opportunities and Challenges in Africa

The positive impact and opportunities of artificial intelligence abound, but unfortunately, so are the risks and challenges.

### 2.1 Opportunities

In the world today, AI is being used in many areas. Companies use it to predict your reason for browsing their website, it is used to predict what items to offer you for purchase in online stores and even used to recognize faces in photographs on your phone.

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<sup>1</sup> Wagdy Sawahel, 'Artificial Intelligence Centre Could Expand Economy', University World News, 4 March 2021, <https://www.universityworldnews.com/post.php?story=20210301092515749>.

<sup>2</sup> Centre for Intellectual Property and Information Technology law, 'State of Artificial Intelligence in Africa Report 2023' (Nairobi: Strathmore University, 22 May 2023), <https://cipit.strathmore.edu/state-of-artificial-intelligence-in-africa-2023-report/>, <https://cipit.strathmore.edu/state-of-artificial-intelligence-in-africa-2023-report/>.

Internationally, AI is already being employed in areas such as in medicine, in agriculture, in engineering and in legal services.

While some of the above listed uses and benefits are beginning to find their way to Africa, areas where AI is already making significant positive impact is in addressing hunger<sup>3</sup>, tackling poverty, identifying the most needy communities<sup>4</sup> and translating African languages.

## 2.2 Challenges

Despite the benefits, challenges such as AI's potential to exacerbate existing inequalities because of deeply ingrained biases towards the poor<sup>5</sup> and because AI is likely going to reduce the relative amount of income of low-skilled labourers as found by studies<sup>6</sup> are of grave concern. Other challenges include the potential threat of AI generated fake videos and audio called deepfakes to spread disinformation and misinformation<sup>7</sup> and the resulting impact of this to peace and the political systems in Africa<sup>8</sup>, discrimination and bias.

## 3 Why is AI Regulation Needed in Africa?

Like we've seen in the previous section, there are potential huge benefits for using AI in addressing issues in Africa but there are just as many potential ills in using the technology.

### 3.1 Benefit from Economic and Societal Advantages

Starting with the positives, Africa would certainly want to harness the power of AI to reap economic benefits and societal advantages through AI. In this regard, regulators in Africa might want to consider how to regulate AI in a manner that encourages the technology to be used in reducing poverty, decreasing hunger and improving crop yields.

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<sup>3</sup> Joseph Bennington-Castro, 'AI Is a Game-Changer in the Fight against Hunger and Poverty. Here's Why', NBC News, 21 June 2017, <https://www.nbcnews.com/mach/tech/ai-game-changer-fight-against-hunger-poverty-here-s-why-ncna774696>.

<sup>4</sup> Kim Harrisberg, 'The African Software Developers Using AI to Fight Inequality', *Reuters*, 16 February 2022, sec. Government, <https://www.reuters.com/legal/government/african-software-developers-using-ai-fight-inequality-2022-02-16/>.

<sup>5</sup> Oarabile Mudongo, 'Africa's Expansion of AI Surveillance — Regional Gaps and Key Trends' (Research ICT Africa, January 2021), [https://researchictafrica.net/wp/wp-content/uploads/2021/01/AI-Surveillance\\_Policy-Brief\\_Oarabile\\_Final.pdf](https://researchictafrica.net/wp/wp-content/uploads/2021/01/AI-Surveillance_Policy-Brief_Oarabile_Final.pdf).

<sup>6</sup> Yingying Lu, 'AI Will Increase Inequality and Raise Tough Questions about Humanity, Economists Warn', *The Conversation*, 27 April 2023, <http://theconversation.com/ai-will-increase-inequality-and-raise-tough-questions-about-humanity-economists-warn-203056>.

<sup>7</sup> Africa Defense Forum, 'Concern Grows as "Deepfakes" Spread Misinformation', *Africa Defense Forum* (blog), 11 April 2023, <https://adf-magazine.com/2023/04/concern-grows-as-deepfakes-spread-misinformation/>.

<sup>8</sup> Africa Defense Forum.

To achieve this, regulators might want to consider how an AI regulation, complimented by existing regulations addresses issues that hinders the adoption and use of AI in Africa like skills, data shortages and diverse African datasets, user attitudes and insufficient infrastructure and connectivity<sup>9</sup>. Sustainable research funding strategies should be considered in the regulation. The goal should be to balance innovation and protection from harm.

### 3.2 Harm: Bias and Discrimination

There are many concerns and examples of how decisions made by AI are made with unwanted bias. One such example<sup>10</sup> is where a researcher used an image generating AI program to generate photos by typing sentences like "black African doctors providing care for white suffering children", but the AI program always depicted the children as black.

Algorithmic bias which is often considered the biggest risk to AI occurs when AI decisions privilege one group over another. Such discrimination is often based on race and gender. Examples include:

- Racial discrimination against blacks where AI is used to identify criminals or used by the justice department to predict criminal reoffending and determine who should most likely be jailed<sup>11</sup>.
- Recruitment algorithms favouring male over female<sup>12</sup>. In certain contexts where there is already human bias regarding the quality of education of blacks, it is easy to see how this could also discriminate over blacks.

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<sup>9</sup> Abejide Ade-Ibijola and Chinedu Okonkwo, 'Artificial Intelligence in Africa: Emerging Challenges', in *Responsible AI in Africa: Challenges and Opportunities*, ed. Damian Okaibedi Eke, Kutoma Wakunuma, and Simisola Akintoye, Social and Cultural Studies of Robots and AI (Cham: Springer International Publishing, 2023), 101–17, [https://doi.org/10.1007/978-3-031-08215-3\\_5](https://doi.org/10.1007/978-3-031-08215-3_5).

<sup>10</sup> Carmen Drahl, 'AI Was Asked to Create Images of Black African Docs Treating White Kids. How'd It Go?', *NPR*, 6 October 2023, sec. Goats and Soda, <https://www.npr.org/sections/goatsandsoda/2023/10/06/1201840678/ai-was-asked-to-create-images-of-black-african-docs-treating-white-kids-howd-it->.

<sup>11</sup> Karen Hao, 'AI Is Sending People to Jail—and Getting It Wrong', *MIT Technology Review*, 21 January 2019, <https://www.technologyreview.com/2019/01/21/137783/algorithms-criminal-justice-ai/>.

<sup>12</sup> Jeffrey Dastin, 'Amazon Scraps Secret AI Recruiting Tool That Showed Bias against Women', *Reuters*, 10 October 2018, sec. Retail, <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G>; Catherine Hanrahan, 'Jade Has Experienced What Unconscious Gender Bias Feels like While Looking for Work', *ABC News*, 1 December 2020, <https://www.abc.net.au/news/2020-12-02/job-recruitment-algorithms-can-have-bias-against-women/12938870>.

- Healthcare algorithm bias against blacks where an algorithm used by hospitals to predict which patients were most likely in need of follow-up care wrongly predicted that white patients were more ill than black patients<sup>13</sup>

Such bias often creeps in when machines are fed historical data or where little or no diverse data exists about a group of people. African regulators must consider whether such harms are a blocker to the use of AI or if something can be done to mitigate the risks such as funding more local AI research and providing more African and diverse datasets to machine learning algorithms.

Other things for regulators to consider are criteria for assessing good AI algorithms to Africans. Requiring developers to consider racial or gender bias and outlining information such as bias mitigation strategies in product documentation are some examples.

### 3.3 Harm: Privacy and Security Concerns

While concerns related to privacy and new technologies is not new, the difference between AI and other technologies is that AI doesn't only process huge amounts of data, but it also uses it to learn, make actionable predictions and automate. Machines may now make data processing decisions where humans have historically exercised a high degree of control, affecting opt-in and opt-out rights.

The use of facial recognition technologies in mass surveillance has been a key concern all over the world. Mass surveillance using facial recognition threatens freedom of expression and freedom of association and even ethnic persecution as seen in the case of blacks during the Black Lives Matter protests<sup>14</sup> and the persecution of Uyghurs in China<sup>15</sup>.

Another key concern of generative AI platforms such as ChatGPT is the risk of the models producing untruths, also called "hallucinations". This can be a problem to response organisations as it could lead to a high number of false positives or even incorrect responses to incidents.

## 4 Governance Approach of AI in Africa

It is the various African governments' responsibility to ensure that proportionate and timely regulations are put in place that mitigates the potential risks and harms of AI while at the

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<sup>13</sup> Shraddha Chakradhar, 'Widely Used Algorithm for Follow-up Care in Hospitals Is Racially Biased, Study Finds', *STAT* (blog), 24 October 2019, <https://www.statnews.com/2019/10/24/widely-used-algorithm-hospitals-racial-bias/>.

<sup>14</sup> Alex Najibi, 'Racial Discrimination in Face Recognition Technology', *Science in the News* (blog), 24 October 2020, <https://sitn.hms.harvard.edu/flash/2020/racial-discrimination-in-face-recognition-technology/>.

<sup>15</sup> Jane Wakefield, 'AI Emotion-Detection Software Tested on Uyghurs', *BBC News*, 25 May 2021, sec. Technology, <https://www.bbc.com/news/technology-57101248>.

same time fostering innovation and adoption. In doing so, African regulators must consider what is best for Africans and their communities.

Regulators should study known AI risks from an African perspective, including but not limited to those mentioned in the earlier sections of this paper. They should also consider whether there are other risks which can be predicted but not known today.

In developing AI regulations, governments should consider community consultations and expert input to inform and help create proportional and appropriate regulation and policies.

Finally, governments in Africa should review and monitor international developments on AI regulation to ensure that governance frameworks developed in Africa are compatible with those used globally.

## 5 Regional Efforts

The idea of a unified African approach or framework on AI policy is often promoted as the way to go by African states and their ministers. Examples of this approach is seen in the AU Working Group on AI<sup>16</sup> formed by the African Union is mandated to study the creation of a common African stance on AI and capacity building framework, the African Artificial Intelligence Blueprint<sup>17</sup> proposed by the African Union chair, South Africa in 2020 seeking a unified regional approach on policy and regulation of AI and finally the call by the African Commission on Human and Peoples' Rights (ACHPR) on the AU and regional bodies to develop a regional regulatory framework that ensures that AI responds to the needs of people on the continent.

However, despite the publication of the African Artificial intelligence Blueprint, many African states, and even South Africa, the champion of the development of the blueprint is yet to develop a national AI strategy nor AI regulation.

## 6 National Efforts

The table below identifies the state of AI governance in Africa. Countries with either dedicated AI legislation, a national AI strategy, an AI policy draft or an expert body on AI are listed on the table. Countries who do not feature on the table have not made any progress on any of the above five indicators.

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<sup>16</sup> African Union, 'Sharm El Sheikh Declaration' (African Union), accessed 12 July 2023, [https://au.int/sites/default/files/decisions/37590-2019\\_sharm\\_el\\_sheikh\\_declaration\\_-\\_stc-cict-3\\_oct\\_2019\\_ver2410-10pm-1rev-2.pdf](https://au.int/sites/default/files/decisions/37590-2019_sharm_el_sheikh_declaration_-_stc-cict-3_oct_2019_ver2410-10pm-1rev-2.pdf).

<sup>17</sup> Smart Africa, 'Artificial Intelligence for Africa' (Smart Africa, 2021), <https://smartafrica.org/knowledge/artificial-intelligence-for-africa/>.

Country	Dedicated AI legislation	Has a national AI strategy	Has draft policy on AI	Expert body on AI	AI is a priority in National Development Plan
Mauritius	Partial	Yes	No	Yes	Yes
Uganda	No	Yes	No	Yes	Partial
Morocco	No	Yes	No	Yes	Yes
Egypt	No	Yes	No	Yes	No
Sierra Leone	No	Yes	No	Yes	Yes
Tunisia	No	No	Yes	Yes	No
Algeria	No	No	No	Yes	Yes
Benin	No	No	No	Yes	No
Ethiopia	No	No	No	Yes	No
Kenya	No	No	No	Yes	No
Nigeria	No	No	No	Yes	Partial
Rwanda	No	Yes	No	Yes	Yes
Namibia	No	No	No	Yes	No
South Africa	No	No	No	Yes	No

Table 1 State of AI Governance in Africa Source: Adapted from ALT Advisory 2022

According to the findings of ALT Advisory<sup>18</sup>, no African country has a dedicated AI legislation, six (6) countries have a National AI strategy and one (1) country has a draft policy on AI.

Despite these developments, the current state of AU governance on the continent exposes how inconsistent regulation and governance can be. Taking South Africa as an example, they are the continent’s champion of the Blueprint for Artificial Intelligence for Africa, alongside Rwanda and Uganda. But South Africa does not yet officially recognise AI as a national development priority.

## 7 Conclusion and Points to Ponder

African legislators through the African Parliamentary Network on Internet Governance (APNIG) frequently call for capacity development on AI<sup>19</sup> for members of parliament, in recognition of the fact that, though they are aware of the potential benefits of AI on the continent, they do not know enough yet to develop objective regulation. In addition, there’s

<sup>18</sup> ALT Advisory, ‘AI Governance in Africa - An Overview of Regulation and Policy Work on Artificial Intelligence in Africa’, September 2022, <https://ai.altadvisory.africa/ai-regulation/>.

<sup>19</sup> EuroDIG, ‘Digital Cooperation between African and European Parliamentarians – Opening Plenary 2023’, accessed 18 September 2023, [https://eurodigwiki.org/wiki/Digital\\_cooperation\\_between\\_African\\_and\\_European\\_parliamentarians\\_%E2%80%93\\_Opening\\_plenary\\_2023](https://eurodigwiki.org/wiki/Digital_cooperation_between_African_and_European_parliamentarians_%E2%80%93_Opening_plenary_2023).

been requests<sup>20</sup> for better cooperation between the west and Africa. This points to a gap in understanding of the technology and how best to regulate it in an African context.

As observed in this paper, regulation of AI in Africa is certainly needed, not only to tackle the potential ills of the technology both specific to Africa and the world in general, but to also take advantage of its benefits specific to Africa. Policy makers and regulators need to quickly equip themselves with basic knowledge of the technology and how it might interact with their local society. They must look at the information and capacity achieved through capacity building and information sharing programs with other regions of the world using an African lens, so that policies and regulations that are developed as a result take into consideration local realities of the various African countries. Identifying regulatory strategies that best prevent the harms and at the same time promote innovation in ways that benefits Africans the most.

Commissioning studies to better understand AI risks from an African perspective, preferably by local African think tanks, should be part of the approach to developing the regulations.

In addition, the communities themselves and local experts must be involved through community input rounds and expert contributions, sought through public requests for input to the draft regulation and policies.

This paper proposes that regulators and policy makers should consider the following points should when developing AI regulation in Africa:

- Acknowledging that most of the discourse on AI regulation is currently in the West, African regulators should consider whether AI challenges that are prioritized in the west are necessarily challenges of priority to Africans.
- African policy makers should identify AI challenges of priority to Africa.
- Consider regulating with an aim of intentionally decreasing bias in AI towards Africans and women.
- Determine whether some aspects of AI concerns are already addressed by existing regulations like fairness laws.
- Consider how to effectively inform and improve awareness of the general population about AI developments.
- Avoid the tendency of simply copying regulations from countries far away in the West whose realities are different.

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<sup>20</sup> Mark Scott, 'The Global South's Missing Voice in AI', *POLITICO* (blog), 31 August 2023, <https://www.politico.eu/newsletter/digital-bridge/the-global-souths-missing-voice-in-ai/>.