AI in Africa. Preliminary Notes on Design and Adoption

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Abstract
The Authors attempt to show how the proliferation of AI-led initiatives across Africa denotes a potential rebirth of modern forms of imperialism. Building on the concept of digital colonialism, we point to how the "for good" rhetoric in the AI arena might have provided the invisible platform for the appropriation of social life for cultural dominance and control. By exploring the subtle power relations underpinning the design and adoption of AI systems in Africa, this note amplifies Kate Crawford's claim that AI is "neither artificial nor intelligent" as widely presumed — one needs to identify the human social values behind and inside the machine.

Introduction

Over the past five years, there has been an accelerated increase in the research, design, and deployment (RDD) of Artificial Intelligence (AI) in the Global South. With emerging technologies that are both pervasive and disruptive, artificial general intelligent systems have succeeded in disrupting the healthcare system globally, ensuring that service providers and users can access products and services via mobile applications, voice prompts, and personalized notifications from the comfort of their homes (Gwagwa et al., 2020). The global trade and e-commerce ecosystem has been disrupted with the effective integration of recommender systems, big data, and machine learning tools; these tools are being used to harvest customer purchase behaviors and provide services tailored to their needs (Tjondronegoro et al., 2022). The combined powers of vast information and recommender systems, when operationalized on merchants' e-commerce platforms, ensure that targeted ads are efficiently delivered to potential customers. Similar trends can be identified in education, agriculture, and security, where the application of AI has been observed to bring about the realization of the ideals of the fourth industrial revolution (Abebe et al., 2021).

The proliferation of AI systems might not be unconnected to the rapid penetration of broadband internet services and the subsequent adoption and utilization of mobile and smart devices in various sectors of the economy such as e-commerce (Nkwo & Orji, 2019), health and wellness (Mburu & Densmore, 2018), teaching and learning (Orji et al., 2018), and national government services (Amukugo & Peters, 2016). These digital devices are embedded with emerging and cutting-edge technologies such as AI, big data, internet-of-things (IoT), etc., which have continued to influence the design of products/services (Damianou, Angelopoulos & Katos, 2019). The wider implication of these emerging technologies is that they are being subconsciously and/or consciously integrated into the most mundane aspects of life and could as such have either a positive or negative impact on the livelihood of communities.

Furthermore, the potential of AI to transform economies and societies has been under scholarly scrutiny as researchers and practitioners have raised ethical and social concerns that ubiquitous computing technologies might embody and extend existing dimensions of inequalities and discrimination across gender, age, class, and race relations (Abebe et al., 2021). Also, there is a concern that AI technologies could be deployed for malicious purposes, such as surreptitious surveillance and cyber-attacks. We believe that these potential risks would be more pronounced in under-served communities that have been systematically marginalized by advances in globalization, which could lead to irreversible damage to the social well-being of a section of society. This may not be unconnected to the fact that these AI-embedded digital technologies are developed with Eurocentric design policies, methodologies, and perspectives (Okolo, Dell & Vashistha, 2022). Most of the time, Eurocentric views are subservient and do not align with the social, cultural, and environmental peculiarities of African communities. For instance, it is reported that the stock of EdTech Chegg dropped by 50% as a result of the operationality of an AI-enabled ChatGPT (Prakash, 2023). The

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question then is: How could African perspectives on innovation inform the design and adoption of AI systems across different communities in Africa?

In this open debate piece, we argue that the proliferation of AI-led initiatives across African communities denotes a potential re-birth of forms of imperialism – "digital colonialism" (Couldry & Mejias, 2018; Viera Magalhães & Couldry, 2021). Developing on the rhetoric of "AI for good" across the literature (Berendt, 2019; Tomašev et al., 2020; Aula & Bowles, 2023), we point to how the vagueness of the meaning of "good" in AI summer and winter narratives might have foregrounded an invisible platform for enacting coloniality — as-in-modernity in action — across every aspect of social life (Floridi, 2020; Birhane, 2020). By exploring the power relations underpinning the design and adoption of AI systems in/for Africa, this paper seeks to amplify Kate Crawford's claim that AI is "neither artificial nor intelligent" as widely presumed - one needs to identify the human values behind and inside the machine, and the driving forces amplifying AI as a transformative vehicle towards Western-led socio-economic development.

Adopting AI in the Global South – Social and Political Implications

Research across disciplines has shown how the proliferation of AI unearths the vulnerability of modern society when regulations and policies couldn't tame technological advances (Crawford, 2021; Brokensha, Kotzé & Senekal, 2023; Eke, Wakunuma & Akintoye, 2023). In the atlas of AI, Kate Crawford provided a critical reflection on the histories and trajectories of AI, showing (1) the human and environmental cost of AI via its extraction of data and material, (2) the exploitative labour practices of data-labelling, (3) the ecological implication of resource use of data centres, (4) the dependence on surveillance systems and control mechanisms, (5) and the profit-driven dimension of its structure and practices as an abstraction (Crawford, 2021). This led to the suggestion that AI is "an idea, an infrastructure, an industry, a form of exercising power [...] a two-word phrase onto which is mapped a complex set of expectations, ideologies, desires, and fears" (Crawford, 2021 p. 18-19). Put differently, AI is like a witty parrot that doesn't have any coherent thought outside of what's been trained.

Furthermore, the analysis of AI development and deployment globally has emphasised how "AI systems are expressions of power that emerge from wider economic and political forces, created to increase profits and centralise control for those who wield them" (Crawford, 2021 p. 211). As an expression of power, AI is the ultimate by-product of capitalist models of excessive production and consumption where the incentive is the codification of social relations as assets to be quantified and profited. As a social structure that sought to extend (or mimic) human subjectivity, it is argued that AI as an untamed technological force can enact both positive and negative consequences in the basic tenet of life. What is of relevance to the context of Africa is the extent to which the proliferation of digital technologies (e.g., AI, big data and so on) could signify the re-birth

of new forms of digital imperialism under the rubric of the fourth industrial revolution. This is premised on how the African perspective on AI design and deployment is largely missing within global AI discourse. Even with the expansion of commentaries (Cisse, 2018; Hao, 2019; Birhane, 2020; Siyonbola, 2021; Allison, 2023), articles (Wairegi, Omino & Rutenberg, 2021; Birhane et al., 2022; Eke & Ogoh, 2022) and edited books (Brokensha, Kotzé & Senekal, 2023; Eke, Wakunuma & Akintoye, 2023) on AI in/from Africa, "Africa's diverse philosophical, religious, political, historical and linguistic traditions that can capture alternative narratives of what AI can and should be are almost forgotten" (Eke & Ogoh, 2022 p. 2). This has begun to change with actors across sectors and the domestication of African perspectives and experiences within the global AI narratives (e.g. *The Black in AI*, *Deep Learning Indaba*, and *Alliance4AI*)

Across the literature, for example, decolonial approaches to AI in Africa have considered how the collective of ethical, socio-cultural, geo-political, and ecological issues impact design and deployment (Brokensha, Kotzé & Senekal, 2023; Eke, Wakunuma & Akintoye, 2023). This is pertinent to how historical and existing power relations in societies direct future discourses of AI, as much as African perspectives are rendered non-existent[1]. When AI development is considered alongside other frames in society, such as culture, values, and community, one might grapple with the power relations underpinning the presentation of AI as a God-like panacea for addressing social issues in the continent. As pointed out by Alvarado (2023), AI is an "epistemic technology" of domination that is designed and deployed within an epistemic context and for an epistemic operation. The simplistic portrayal and description of AI as the means to the end — in this case economic development, social mobility, and political stability — often miss the central argument that AI as a real abstraction encodes collective human knowledge, relations, and behaviours as computational algorithms to be manipulated and predicated. As an abstraction that emerged from and embedded within existing structures of society, one might argue that AI systems, by definition, do not express moral intelligence as developed across human history, but rather encode human social labour into repeatable procedures that pass as general intelligence. Even the purposeful efforts to align AI towards human ethical values don't seem to challenge the foundational premise of AI in Africa, which is the exploitation of indigenous knowledge and communities and the extraction of resources and manpower.

Often, the techno-pessimistic narratives presented from the Global South depict how the adoption of AI systems — as an agential tool/instrument — could bring about economic development and social mobility (Bjola, 2022). Under the banner of "AI for good", the emphasis is that AI systems can exhibit higher human intelligence, and when designed and adopted appropriately could resolve humanity's direr sustainable development challenges e.g., climate change, abject poverty, social inequality etc (Aula & Bowles, 2023). By tapping into the utilities of computational intelligence and engineering capabilities, the common assumption is that AI can accelerate socio-economic relations across Africa to the tune of $15 trillion in economic value by 2030. Even with the uneven adoption of AI across the Global North, there appears to be an oversight on how these sys-

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tems could build on the existing digital divide of infrastructural and polarised use practices; nevertheless, their diffusion is continuously pushed across the Global South.

As a result of the disconnect between AI's short-lived winter narratives and the long-summer realities in Africa, researchers across disciplines have recognized how digital coloniality manifests in the AI arena - algorithm oppression and bias (Birhane, 2021). For Birhane (2020), the emergence of the fourth industrial revolution has by default re-entered the African continent into the second phase of neo-colonization. This is evidenced by how national governments, multinational corporations, and the private sectors have relegated the entire African continent to an epistemic laboratory for experimentation. For example, it is common knowledge Pfizer tested the Trovan drug in Nigeria to cure Meningitis; AZT HIV-AIDS and Depo-Provera contraceptive drugs were tested in Zimbabwe, with African subjects as objects of experimentation. The sleeping sickness experiment in East Africa and the Tuskegee syphilis study were also unethically carried out under the rhetorical vehicle of "experimental medicine or no medicine at all". In both examples, one might deduce how marginalised groups are rendered as private property to be regulated, where few assume authority over and enact power upon communities.

Under the rhetoric of "liberate the bottom billion", Facebook decided to re-map the continent of Africa in response to the current and future humanitarian crisis. Microsoft decided to re-design global healthcare models where population health is best left to tech oligarchs' philanthropic venturing. As rightly pointed out by Birhane (2020), these cases have pointed to how specific social actors have continuously rendered non-existent social issues as technically solvable, thus using their perceived power to legitimise specific interventions as natural remedies. This is problematic in many ways. And in the remainder of this section, we turn our attention to the oversimplified tech for good "next billion users" connectivity initiatives and some "AI for good" agriculture-led projects across the Global South for some directions.

First, the billion-user narrative portrayed digital connectivity as a human right and then moved further to solidify the case that digitization of social and political life is a development optic in the Global South (Oyedemi, 2021). The initiative highlights how soft power is being utilised by big tech to colonise (as in regulate and control) communication spaces and technological infrastructures. While some might argue for recognizing the intent of big tech to do good — the slogan is to make the world a better place but also to make money — a closer analysis of their actions (as in the different dimensions of the doing-good initiatives) might highlight the invisible patterns of exploitation, extraction, and expansion underway.

Second, using the rhetoric of "for good", AI systems are presented as value-free and universal instruments that can lead to the common good. Such simplistic framing of AI in the Global South upholds stereotypes and contradictions regarding local communities — just as colonialists asserted non-western spaces as primitive — where something external becomes institutionalised as the new model of organisation. For example, the Google Nuru platform predicted cassava plant diseases in Tanzania while the Microsoft FarmBeats platform provided insights that could improve productivity across the agricultural value chain (Hao, 2019). Although these

efforts are commendable, one must not lose sight of how big tech developed on the mantra of "premature deindustrialization" where the tide of the Californian ideology — automation, productivity, efficiency — led their expansion into new territories and potential markets. Often, these initiatives are premised on imported systems that build on the Eurocentric linear view of technological determinism, which inevitably blurs the line between philantro-entrepreneurism and philantro-capitalism. The embrace of "for good" to showcase the desirability of specific cooperation-led initiatives often negates alternative constitutions of AI for sustainable use. The material implication of expressing AI as a means and end to addressing social issues in the present and the future is that those corporate philanthropic visions inform the strategies needed to mitigate or amplify the unintended consequences of those systems. With the invisible power of big tech to influence the narrative of AI in Africa along with social development and the common good, there is the possibility that its adoption will be directed by their interest.

Also, one might question the premise of those initiatives when issues surrounding data ownership and security, infrastructure governance, inter-sector monopoly, and labour practices are considered afterthoughts. With the monology of markets and the media, in terms of ownership of digital infrastructure and control of socio-political discourse, big tech corporations have incentivized self-exploitation to the point that individual users and government entities bid for their interest of maximal production of capital. While *digital nudges* correct our individual and collective behaviours upon profit-driven ideals, *leapfrogging* incentivises political government's responsibility to the point that basic human needs such as healthcare and education are commoditized entities to be regulated and profited. What this might suggest is that AI systems are by no means value-free, specific human values and opinions shape their design and adoption. And with the Google and Microsoft case discussed earlier, one might recognize how their initiatives might have created new models for agriculture management via subscription, unending consumption and debt peonage.

The unintended consequences of the "next billion users" initiative and "AI-led agriculture" projects is that market-oriented logic directs social relations to the point that individuals are stuck in a proverbial waiting room — a space where ambiguity and vagueness prevail — where the past gets recycled and the present largely ignored. Even when cautionary tales about the exploitative and biased nature of AI materialised (Birhane, 2020), there appears to be a re-branding of AI viz the dominant tech-culture that sought to minimise the projected harm, and not amplify the long-term good. This new techno-culture where social issues such as poverty, inequality, and injustice are conceived as problems to be resolved computationally often shapes our collective expectation of how future AI systems ought to be designed and adapted to support diverse ways of being. But also, how the desired future presents our technology-mediated society will be significantly informed by the narratives of the historical present. As noted by Viera Magalhães and Couldry (2021), the black box of techno-philanthropy obscures the reality that whenever big tech gives a dollar, it must be taken away in multiples; and it is this exploitative pattern of "digital conquest" that this section has sought to emphasise.

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In the reflection of this paper, we discuss how specific principles and requirements might influence the re-design of AI technologies in the African context to amplify community-wide aspirations and capabilities. We recognize that concerted research efforts are being made to ensure that AI systems are developed responsibly and utilised in ways that accelerate long-term value creation for the wider society. However, these concentrated efforts would only materialise (as in translate) into a sustainable ecosystem when dynamic ethical guidelines that align with the peculiarities of the social context are established in collaboration between national governments, industry leaders, researchers, and practitioners in the field of AI.

Deploying AI in the Global South.
Principles and Policy Requirements

Ethics and Trust

Ethical AI is often synonymous with Responsible AI which entails the research and design of AI technologies that embody the core principles commonly adopted in bioethics: beneficence, on-maleficence, autonomy, and justice. This has led to significant discussions around the newness culture that has rendered ethics shopping and dumping common across disciplines (Floridi, 2019). A range of initiatives across governments and the private sector has led to a new set of ethical principles for developing and regulating AI, which some have recognized as "leading to unnecessary repetition and redundancy, or, if they differ significantly, confusion and ambiguity will result instead" (Floridi & Cowls, 2022 p. 2). For AI technologies to be effective and contribute to the flourishing of the wider society, their features must be tailored to the social values and peculiar situations of the communities. This will involve identifying, learning, and understanding the ethics, values and rules that guide relevant interpersonal and communal engagements and interactions. Subsequently, system analysts and designers would need to map these ethics, values and social rules to the relevant social design strategies and translate them into critical digital design requirements and guidelines that can be operationalized on emerging technologies, including AI systems, to support users in performing everyday tasks.

Furthermore, trustworthy AI entails designing AI technologies so that users can entrust their activities to the system without fear and any other form of apprehension. A trustworthy system will provoke hope, confidence, and faith in users thereby increasing the chances for extended adoption and enhanced user engagement (Alupo, Omeiza & Vernon, 2022). We argue that factoring in the social context and cultural specificities of the potential user population in the design and development of AI technologies would not only build up social trust but will also deepen local participation in the conceptualization, design, development, and deployment of AI and enhance the chances of adoption of the technology. This view agrees with previous studies by (Ruttkamp-Bloem, 2023), who canvasses for the actualization of the ideal for responsible AI in Africa, focusing on the AI ethics policy environment on the continent. It is important to note that in defending an epistemic just AI ethics system, culture matters

in conversations on ethics. Therefore, the author opines that it will involve the consideration of the impact of context and culture on the successful adoption of AI technologies in general and on trust in AI technology and openness to AI regulation.

Similarly, it is inherently difficult to implement some of these existing AI policies and regulatory requirements without capacitating the relevant stakeholders in the communities (including users, governments, developers, judiciary, etc.) about the place of African ethical values in AI designs and development. This form of education could be formal and/or informal and could serve as a veritable confidence-building mechanism for AI research and design. This view is justified by recent research by (Kiemde & Kora, 2022) which describes how education could play a significant role in supporting the development of ethical and trustworthy AI in Africa that will consider the social values and beliefs of the people through the expansion and capacitation of AI teams. This will involve the incorporation of African ethical values into the design of teaching and learning curricula in the ethics of AI that will be used as training materials for capacity building of AI development stakeholders on the continent.

Transparency and Responsibility

This entails designing AI technologies that are easy to understand. This is particularly important to accommodate and provide a sense of belonging to the diverse knowledge levels of users in the Global South. We argue that such AI should be designed to be inherently and relationally explainable, and essentially promote open communication and disclosure with clients and customers. This ensures that the user community knows and understands the implications of their engagement with AI technologies. This will help them to make informed decisions on possible adoption and utilisation. This view agrees with results from recent studies by (Okolo, Dell & Vashistha, 2022) which investigated the factors that impact the effective adoption and implementation of AI technologies in Africa. Understanding the nuances and sociotechnical implications of AI development in the African context compared to the West and China and leveraging existing strengths in software development as well as AI and complimentary research communities, while investing in infrastructure, are viable steps towards building AI technologies that are transparent and accountable. This is in line with recent research by Nwankwo and Sonna (2019) which canvasses for the inclusion of the people who will be most affected by AI technology. The authors make the case for the need to design AI that Africans can socially agree with, that guarantees fairness and equity, and that provides tools and frameworks to ensure ethical development and deployment (Nwankwo & Sonna, 2019). This ensures that the potential harms and risks of AI do not cancel out the benefits of AI in Africa.

In addition, responsibility demands that the AI system is designed to be always accountable to the users. Being accountable requires designers of the technology to integrate the ability to anticipate and provide remedies to potential difficulties in an AI system. But this cannot be actualized without a proper understanding of the possible user contexts, situations and circumstances which could

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give rise to the potential system difficulties. Also, the system should hypothetically assume some level of personhood which makes it answerable and share in the liability and gains that may arise during deployment and usage. This viewpoint is justified by previous studies (Naidoo, 2022) which examined the legal personhood of AI systems. The study wanted to find out whether there are compelling moral and legal reasons to grant some AI systems a degree of legal personhood. Although the findings observed that discussions in this area are not the main argument of African philosophical thought, the paper argues that there are moral reasons and strong legal rationales to grant some forms of legal liability to AI systems (Naidoo, 2022). This is because, within the communitarian framework, African philosophical thought may allow for some AI systems to be both subjects and objects of relationships. Moreover, there are other important legal values for endowing some AI systems with legal personhood and they include legal efficiency, market efficiency, legal certainty, and accountability (Naidoo, 2022). Additionally, the result of research by Langat, Mwakio, and Ayuku (2020) which aimed to review the ethics of AI considering the issues that have been outlined by others in the light of communitarian ethics as seen in Africa, demonstrates that a thinking machine such as an AI system has some level of impact on the society and how individuals would relate with each other. Therefore, the machine should assume a certain level of responsibility together with its designers in owning up and managing its processes and the potential outcomes.

Justice and Fairness

These principles demand that the design of AI technologies be consistent with the prevailing social and communal ethics and promote equality, equity, (non-)bias, and (non-)discrimination. This is principally essential because AI could have negative consequences on the moral values and human rights of the people if not properly developed and deployed with the potential users in mind. This often leads to technology abandonment. One of the major concerns of AI technologies is that they could be biased, therefore perpetuating existing inequalities and discrimination. This view agrees with previous studies that have explored domain-specific AI ethics risks in South Africa, and uncovered that bias among other risks has negative effects on the adoption and utilisation of AI technologies in Africa (Ormond, 2022). Nayebare (2021) recommended the early development of indigenous AI policies in the early stages of AI development to prevent abandoning the technology, stifling innovation, and avoiding some of the already foreseen challenges of AI such as bias and discrimination.

In addition, (Gwagwa et al., 2022) aimed to explore how to improve the terms on which African populations and subpopulations and their concerns are included in the global AI ethics discourses. The study shows that African values like Ubuntu, as well as the proposed moral ethics principles such as harmony and consensus, have the potential to have a significant influence on AI ethics and policy, and could further the entrenchment of justice and fairness if integrated into the design of AI in Africa. But this can only become

a reality when the unequal discourse of AI across the globe is remedied by the intentional inclusion of the Global South in the emerging AI research and design discussions. This would make AI more accessible to marginalised communities and potentially mitigate the adverse effects on the users of the technology.

Communality and Sustainability

Communality is often synonymous with solidarity, unity, and cohesion of social groups or people who share common moral values and characteristics such as beliefs, visions, and ideals. These social values and characteristics usually guide how the homogeneous groups perceive, receive, adopt, and utilise things including innovations and technologies. Therefore, the principle of community in this context requires stakeholders in the AI ecosystem to work towards developing AI technologies to align with the needs and aspirations of the community and support them to realise their full potential. This form of support could involve designing AI that can contribute to the expansion and enhancement of the agricultural and livestock activities of the community, growing the knowledge base of the members of the community through informal and formal education, etc. This view is justified by the results of recent studies which aimed to critically analyse the developing AI ecosystems from an African perspective (Wairegi, Omino & Rutenberg, 2021), and how they could support the design and adoption of AI amongst indigenous and marginalised communities. The authors created an AI stakeholder framework which according to their research is one of the crucial first steps in this process (Wairegi, Omino & Rutenberg, 2021).

Furthermore, sustainability entails designing AI that is viable and can support local, business, and environmental processes with minimal or no hitches. This could inform sustained availability and/or the supply and capacity of human capacity for the AI processes. Previous studies have discussed issues bordering on the sustainable design of digital health services and proposed solutions for the responsible development and adoption of AI innovations in healthcare services in Africa (e.g. Ibeneme et al., 2021). Specifically, the authors suggested the collaboration of governments and relevant AI stakeholders in this regard, noting that government ownership and leadership were critical for sustainable financing and effective scale-up of AI-enabled applications in Africa (Ibeneme et al., 2021).

Similarly, timely policy guidelines for AI should be top on the national digital agendas and prioritise inclusive digital, data and computing infrastructure and skills development (Adams, 2022). This will encourage local AI capability favouring local economies and ecosystems. Moreover, sustainability demands that adverse external AI technology transfer agreements that conflict with the realisation of inclusive developmental priorities of the communities should be jettisoned. This can be seen in the Egyptian national AI strategy (Adams, 2022). There are also perspectives on the implications of AI on gender equality which must be carefully considered given the continent's existing digital gender divide, the retrogression of gender equality and the advances in data-led economies that the Covid-19 pandemic has brought about. This ensures that AI stakeholders are kept in the loop of its design, evaluation and adoption.

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Concluding Note: On the Design(s) for Next Digital Coloniality

In this reflection paper, we present our collective views on how the effort to push technology-mediated appraisal of public issues such as healthcare and agriculture in Africa misses the point that AI as a tool/instrument for exercising power is neither agential nor artificial. Recent media reports and commentaries have suggested that as much as AI is beneficial to the socioeconomic advancement of the global economy, its potentially negative effects on the sociocultural well-being and livelihood of systematically marginalised communities in Africa raise significant concerns in terms of ethics, regulation, policy, and education (Cisse, 2018; Hao, 2019; Birhane, 2020). We argue that the proliferation of AI-led initiatives across African communities denote a potential re-birth of forms of imperialism — "digital colonialism" — and that the wider computing and design community ought to identify the values embedded in AI for good initiatives, systems, and end products. Building on our preliminary discussion of AI in Africa, we end this paper by providing some directions where the principal taxonomies above could be incorporated as practical abstractions to the re-design of AI-mediated technologies that amplify community-wide aspirations and capabilities.

Ethical and Trustworthy AI

Trustworthy AI are technologies that are reliable and transparent, fair, and respectful of the privacy and security of the users. Trustworthy issues in AI could be addressed by prioritising the implementation of socio-culturally appropriate data governance practices, bias mitigation techniques, model explainability and transparency, and involving users and stakeholders in the design process to understand their concerns and preferences regarding AI technology. The operationalization of user feedback mechanisms and continuous ethical AI education of relevant stakeholders, including members of the user communities, would also assist in safeguarding against data breaches and unauthorised access and promote a culture of ethical awareness and responsibility in AI adoption and utilisation. Building trustworthiness into AI would not only ensure that potential users have confidence in the entire ecosystem but also ensure that AI systems contribute positively to societal concerns.

Transparent and Responsible AI

Beyond regulatory requirements, building responsibility and transparency into AI is required to earn and maintain the trust of the local users, while making sure that the tool provides socially desirable benefits to the members of the community in ethical ways. These could be realised through the establishment of a governance framework to oversee AI development lifecycle, utilisation of high-quality data for training/testing of models, implementation of strategies to techniques to address bias, as well as ethical training for relevant stakeholders (developers/users). Prioritising transparency by design

and involving users in designing socio-culturally sensitive user interfaces of AI systems would offer clarity about the functionality, limitations, and the ability of the AI system to provide feedback should there be erroneous or harmful AI outcomes in the future. Transparency and audit reviews by independent experts and members of the indigenous user communities could also provide insights into the AI system's performance, data usage, and impact on users' livelihood.

Justice and Fairness-led AI

Building justice and fairness into AI technologies is vital to ensuring that AI systems do not perpetuate or worsen social biases, discrimination, or inequities among indigenous users in society. These can be realised and integrated into the design of responsible AI through the utilisation of high-quality training data and prioritisation of algorithmic transparency, bias assessment, and mitigation techniques to evaluate your AI system's performance for different demographic groups. There is also the need to involve users and stakeholders in the design process, and implement accountability mechanisms, as well as continuous monitoring and auditing mechanisms to detect and address fairness issues as they arise in real-world usage of AI systems. Regulatory compliance with laws related to fairness, discrimination, and bias, such as anti-discrimination laws or GDPR in the AI system design and use processes, as well as AI ethics education and training for stakeholders, would assist in creating AI technologies that respect and promote justice and fairness for all users.

Sustainable and Community-led AI

Responsible AI technologies can be designed to foster community engagement, inclusivity, and diversity, as well as long-term environmental responsibility. It involves a holistic approach that integrates ethical, social, and environmental considerations into AI development utilisation strategies. These could be realised through community-driven data collection initiatives and user feedback to understand needs and concerns, community-oriented sustainability practices, participation in open source and collaborative AI projects that target community problems, as well as the development of AI interfaces and applications that are accessible and can be used by people with diverse abilities and needs. In addition, community-based education, blended support and maintenance for AI systems as well as fair and equitable access to AI technologies for all community members, regardless of socio-economic status or background would be invaluable to ensuring more inclusive and community-oriented AI solutions that benefit everyone.

In this preliminary note, we've attempted to show how the AI revolution, just as the values that underpinned the first to the fourth industrial revolutions, can't save us all. AI systems merely operate within existing capitalist ideals and forces that could propagate consequences similar to imperialism. One might wonder why that is the case: a plausible direction is that just as modernity uses the soft power of globalisation to define territories and control systems

of organisation, AI uses the invisibility of digital nudge to appropriate the most mundane tenets of social life for cultural dominance and political control. Even where African perspectives are largely missing in global AI narratives, this lack presents an opportunity where local actors and institutions can with purpose redirect the emerging pattern of AI design and adoption across African communities. The future of AI might not solely be in Africa as postulated by others, the future is in the transnational exchanges — the specificities, the processes, and the content — that inform our understanding of what technologies (e.g. AI) can do to amplify common aspirations, build capabilities and drive intrinsic growth.

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