

ARTIFICIAL INTELLIGENCE AND DIGITAL COLONIALISM IN AFRICA

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Abstract

A cursory glance at the historical development of the relations of Africa with the West reveals that colonialism did not end but only evolved into neocolonialism. While the former framework focused on the acquisition of land assets (land grab), the present colonialism focuses on the exploitation of data assets (data grab), threatening new dimensions of our lives and future, still with the tact of a civilization mission. Through data colonialism effected with AI, a social order is created that extracts data from persons, generating massive wealth for a few on a global scale. With three in eight people using Facebook, one in eight people using TikTok, etc., Africa again faces new threats of political domination and stagnation as digital technologies echo the colonial era's power dynamic, where technical advancements widened the gap between Africa and the rest of the world. The relevant questions in this work include: what data is extracted from, for what, and on what terms? This paper argues that AI as the product of Western technologies continuous, without violence, comes with the same colonial goals of explore (in this case, data territories- Google, Amazon, Facebook, etc), expand (expanding platforms and connections between platforms), exploit (exploiting new ways to sell apps and targeted advertising) and exterminate (eradicating alternative ways of thinking, and shaping thinking on racism and genocide). The paper, using the critical and analytical methods, will examine the various ways AI continues to perpetuate colonial domination. This paper argues that AI has increased Africa's dependence on the West and challenges the colonial power structure. The paper proposes a change in the way AI is developed and used, and encourages programs that will thrive on a balance of relations between Africa and the West.

Keywords: Artificial Intelligence, Colonialism, Neo-colonialism, Technology, Africa

Introduction

Artificial intelligence, just like every academic inquiry, started with wonder filled with fantasies, dreams, possibilities, and imagination. Sharma et al said that “the origins of artificial intelligence can be traced back to early philosophical discussions that pondered the possibility of creating machines with human-like intelligence”¹. They further argued that, “the hunt to duplicate human thought processes and problem-fixing skills has been a recurring topic in

¹ Twinkle Sharma, Poonam, Renuka Arora. 2024. “The Evolution of Artificial Intelligence - A Comprehensive Review”. *International Journal of Science, Engineering and Technology*. 12:3.

various intellectual traditions at some point in history”.² Alan Turing, in his test, which later became known as the “Turing test,” spoke of the capacity of computers for the capability of human intelligence³. John McCarthy described the term artificial intelligence (AI) as the science and engineering of making intelligent machines⁴.

Intelligent machines or AI have become part of man’s existence even before it started gaining momentum in recent times, and have taken over the way we live, think, and work. It is all over the place, including in our homes where we command Alexa to perform simple human tasks like putting on the lights and opening and closing doors, in our transport system where we have electronically driven cars, in our health sectors, where we can diagnose ailments through the aid of machines. As the world is moving on a fast lane, AI seems to be the answer it needs and questions.

However, the growth and advancement of AI poses a number of concern and threats especially for Africans. Kumar; Ikash, Mohith; Ajayaganesh were of the opinion that as AI advances, it is important to consider the ethical implications and ensure that it is developed and deployed in a responsible manner.⁵ There are concerns about the potential for AI to exacerbate biases and discrimination, as machines may learn from data that reflects existing societal biases⁶. This can result in unfair and discriminatory decision-making, such as in hiring or lending decisions⁷. Beneath the surface of AI’s potential benefits in all of today’s world economy lies a complex web of power dynamics that can perpetuate colonialism, exploitation of data, and political domination. This is particularly felt in the Global South, like Africa, where AI has become an integral tool in the colonial matrix of power. This paper will, therefore, study the potential of artificial intelligence for data exploitation in Africa. This notwithstanding, what is artificial intelligence?

Understanding Artificial Intelligence

Ghosh and Thirugnanam hold that Artificial Intelligence (AI) is the branch of computer science that enables computers to mimic human behavior and assist humans in better performance in the field of science and technology⁸. They went further to state that replicating human intelligence, solving knowledge-intensive tasks, building machines that can perform tasks that require human intelligence, and creating a system that can learn by itself are the few specific goals of AI⁹.

Andreas Kaplan and Michael Haenlein aver that artificial intelligence is a system’s ability to correctly interpret external data, to learn from such data, and to use those learnings

² ibid

³ Turing, A. M. 1950. “Computing Machinery and Intelligence”. *Mind*. 59(236), 433–460.

⁴ ibid

⁵ S. K. Dhaswin Kumar¹, R. Vikash, S. M. Mohith, V. Ajayaganesh. 2023. “Evolution of Artificial Intelligence (AI)”. *International Journal of Research Publication and Reviews*. 4(5): 678-686

⁶ ibid

⁷ ibid

⁸ Ghosh, M., Thirugnanam, A. (2021). Introduction to Artificial Intelligence. In: Srinivasa, K.G., G. M., S., Sekhar, S.R.M. (eds) *Artificial Intelligence for Information Management: A Healthcare Perspective*. Studies in Big Data, vol 88. Springer, Singapore. https://doi.org/10.1007/978-981-16-0415-7_2

⁹ ibid

to achieve specific goals and tasks through flexible adaptation¹⁰. This simply means AI's ability to solve problems through data interpretation. Explaining this further, they said that AI has elements of cognitive and emotional intelligence, i.e., understanding human emotions, and the use of these in its decision-making¹¹. At the humanized level, AI exhibits characteristics of all types of competencies (i.e., cognitive, emotional, and social intelligence), and can be self-aware in its interactions just the same way humans do.¹²

Colonialism, Neo-colonialism and the African Continent

According to Ocheni and Nwankwo, Colonialism is the direct and overall domination of one country by another based on state power being in the hands of a foreign power (For example, the direct and overall domination of Nigeria by Britain between 1900-1960). The first objective of colonialism is political domination. The second objective is to make the exploitation of the colonized country.¹³ Africa was conquered by the Europeans in the late 18th and 19th centuries. European colonialists' main objective was political domination, followed by exploitation.¹⁴ Ocheni and Nwankwo link colonialism to the quest for raw materials by the European world:

The Industrial Revolution was a revolutionary trend in the history of mankind. The problem of how to lubricate machineries came up with the emergence of the industrial revolution. The slave trade and slavery have by this fulfilled their basic function of providing the primitive capital. The quest for the investment of the accumulated capital and the need for raw materials led to the colonization of Africa¹⁵.

Chinweizu adds that:

When Europe pioneered industrial capitalism, her demands upon the resources of the world increased tremendously. In addition to obtaining spices for her tables and manpower for her mines and plantations in the Americas, Europe set out to seize for her factories the mineral and agricultural resources of all the world. Her need to take African manpower to the Americas declined. She needed instead to put African labour to work in Africa, digging up for her the riches of African mines; the trading companies that had for centuries bought and sold on Africa's coast were found¹⁶.

Europe, therefore, sought to control mineral and agricultural resources worldwide to supply the machinery and mass production at the heart of industrial capitalism. In Africa, this shift meant a reduced focus on exporting enslaved African labor to the Americas. Instead, Europe needed African labor to remain in Africa and extract valuable resources like gold, diamonds, and other minerals directly from African lands. European powers and trading

¹⁰ Kaplan, A. M., & Haenlein, M. 2009. "The Fairyland of Second Life: About Virtual Social Worlds and how to Use Them". *Business Horizons*. 52(6), 5.

¹¹ *ibid*

¹² Janah, L. 2018. *How East Africa Trains AI*. Retrieved from LinkedIn: <https://www.linkedin.com/pulse/how-east-africa-trains-ai-leila-janah>

¹³ Stephen Ocheni, Basil C. Nwankwo. 2012. "Analysis of Colonialism and Its Impact in Africa". *Cross-Cultural Communication*. 8 (3), 46-54.

¹⁴ *ibid*

¹⁵ *ibid*

¹⁶ Chinweizu, C. A. 1978. *The East and the Rest of US*. Lagos: Nok Publishers (Nigeria) Ltd, pp. 5-55

companies, which had previously engaged primarily in coastal trade, expanded their reach inland to seize control of these resources. This resulted in the establishment of colonial administrations and economies that were structured to extract wealth from Africa for European gain, ultimately intensifying European imperialism across the continent. To gain full control. According to Chinweizu:

The European powers began systematically to interfere with the sovereignty of African states and to intrude upon their internal affairs. The Europeans began to help one faction to depose a ruler and install another, and to bestow honours, titles, and recognition upon those whose rule they found it in their interest to support. The officially trumpeted goals of such interference were to suppress the slave trade and to promote “legitimate” trade.¹⁷

Modern-day colonialism has shifted ground. It no longer relies heavily on land and the slave trade. It has metamorphosed into artificial intelligence. Africa’s data, resources, and manpower are being syphoned daily. It undermines local innovations while suppressing African cultures and perspectives, thus threatening the continent's digital sovereignty. The imposition of Western knowledge and value systems has discarded the indigenous knowledge of the African people, regarding them as primitive or superstitious. This has resulted in linguistic, cultural, and heritage losses¹⁸.

Succeeding colonialism is neo-colonialism. It refers to the continuation of colonial practices, power, and influences in the post-colonial era through economic, political, and cultural means. Kwame Nkrumah described neo-colonialism as the last stage of imperialism:

The neo-colonialism of today represents imperialism in its final and perhaps its most dangerous stage. In the past, it was possible to convert a country upon which a neo-colonial regime had been imposed, Egypt in the nineteenth century is an example, into a colonial territory. Today, this process is no longer feasible. Old-fashioned colonialism is by no means entirely abolished. It still constitutes an African problem, but it is everywhere on the retreat. Once a territory has become nominally independent, it is no longer possible, as it was in the last century, to reverse the process. Existing colonies may linger on, but no new colonies will be created. In place of colonialism as the main instrument of imperialism, we have today neo-colonialism. The essence of neo-colonialism is that the State which is subject to it is, in theory, independent and has all the outward trappings of international sovereignty. In reality, its economic system and thus its political policy are directed from outside.¹⁹

Kwame Nkrumah argued further that:

Africa is a paradox that illustrates and highlights neo-colonialism. Her earth is rich, yet the products that come from above and below her soil continue to enrich, not Africans predominantly, but groups and individuals who operate to Africa’s impoverishment. With a roughly estimated population of 280 million, about eight per cent of the world’s

¹⁷ *ibid*

¹⁸ Stephen Ocheni, Basil C. Nwankwo. 2012. “Analysis of Colonialism and Its Impact in Africa”. *Cross-Cultural Communication*. 8 (3), 46-54.

¹⁹ Kwame Nkrumah. 1966. *Neo-Colonialism, the Last Stage of imperialism*. USA: International Publishers Co. Inc., p. 1

population, Africa accounts for only two per cent of the world's total production. Yet even the present very inadequate surveys of Africa's natural resources show the continent to have immense, untapped wealth²⁰.

The colonizers are no longer looking for new territories to invade and conquer. African countries are still controlled by Western powers through subtle²¹. Neo-colonialism exploits and controls world economies, world cultures, societies, especially the African nations, through economic exploitation, debt dependency, unequal trade agreements, erasure of indigenous cultures, social unrest, human rights abuse, environmental degradation, and health crisis. The dependency rate on Western technologies is nothing but Neo-colonization. Africa is now facing new threats and challenges with the rise of artificial intelligence²². Menon notes that:

As digital technologies become the dominant driver of the global economy, Africa finds itself once again faced with the prospect of developmental stagnation. In an increasingly technological age, parallels to the colonial era can be made, particularly in reference to the detrimental impact on the African economy and the continent's developmental trajectory. AI, which drives these technologies, is informed by algorithms. The biases inherent in these algorithms lead to digital discrimination. This discrimination has resulted in a new form of colonialism, referred to as digital neocolonialism, which denotes the exclusionary barrier that has been created by algorithms²³.

This places Africa as a continent that exists only to serve the interests of the West and nothing more.

Artificial Intelligence and digital neo-colonialism in Africa

In Africa, AI is in huge use: Aurora Health (Kenya) is leveraging AI to develop tools for improving cardiovascular healthcare, providing innovative solutions in medical diagnostics; CropScan (Kenya) combines solar-powered IoT devices with AI to enhance precision farming, benefiting smallholder farmers; Cure Bionics (Tunisia) uses AI to create smart, customizable 3D-printed prosthetic arms for individuals with limb differences; DevisionX (Egypt) offers low-code platforms for AI-based computer vision applications, simplifying the development process for various industries; Kalio (Cameroon) focuses on AI-powered IoT solutions tailored for agriculture, aiming to increase productivity and reduce waste; Kitovu (Nigeria) uses AI to develop tools for optimizing agricultural warehouse management and supply chains; NextAI Studios (Kenya) creates toys embedded with AI for emotion detection, designed to support children's mental health; Sparcx (South Africa) applies AI in radar signal processing to improve system efficiency in aerospace and defense sec²⁴.

Arakpogun et al think that to avoid a repeat of the missed opportunities from the previous industrial revolutions that have left a negative legacy for African countries, governments must create an enabling environment for these AI startups to flourish and

²⁰ Ibid, p. 14

²¹ Ibid

²² ibid

²³ Sunita Menon. 2023. "Postcolonial Differentials in Algorithmic Bias: Challenging Digital Neo-Colonialism in Africa". *Scripted*. 20(2), p. 2

²⁴ Onyeagoro, J. 2024. *AI startups in Africa*. <https://techafricanews.com/2024/09/26/ai-startups-in-africa-shaping-the-future-of-the-continents-digital-transformation>

accelerate the socio-economic development of Africa²⁵. These AI start-ups have taken the first step to overcome the infrastructure and resource constraints prevalent across Africa to engineer local solutions.²⁶ Thus, if Africa cannot effectively integrate into this new digital economy, it risks economic marginalization. This would mean missed opportunities for growth, innovation, and job creation, which are essential for addressing poverty and improving standards of living. Economically marginalized regions often face broader political and social impacts, making it harder for African nations to assert their interests and values on the global stage. Thus, Menon noted that:

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With three in eight people in Africa using Facebook, one in eight people using TikTok, Africa finds itself once again faced with the prospect of developmental stagnation. Menon notes further that:

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This suggests that Africa, as a continent, is at risk of being left behind or marginalized in the rapidly advancing global economy driven by digital technology. Here's a deeper look at what this means: Around the world, digital technologies like artificial intelligence, data analytics, blockchain, and cloud computing are transforming industries, creating new business models, and driving economic growth. These technologies are central to modern innovation, efficiency, and competitiveness, especially in economies that are becoming more interconnected globally.

Artificial Intelligence (AI) and the place of Africa in the Colonial Matrix of Power sit at the intersection of technology, history, power dynamics, and postcolonial theory. It touches on how AI, as a global technology, can reinforce or challenge existing power structures rooted in colonialism.²⁹ The colonial period was defined by the process of imposing European constructs and standards on non-Western nations, particularly in the 19th and 20th centuries.

²⁵ Emmanuel Ogiemwonyi Arakpogun¹, Ziad Elsahn¹, Femi Olan¹, Farid Elsahn. 2024. *Artificial intelligence in Africa: challenges and opportunities* Newcastle Business School. Northumbria University, Newcastle upon Tyne.

²⁶ *ibid*

²⁷ Sunita Menon. Op. Cit. p.1

²⁸ *ibid*

²⁹ Isabella Basaglia. 2012. 'Contribution of Post-Colonial Theory to the Construction of Identity in International Relations'. Cross-Sections 71.

This was done through acquiring, dominating, and exploiting territory with the imposition of Western, in particular European, ideals.³⁰

The idea of a colonial matrix of power was a concept developed by Anibal Quijano in his work titled "Coloniality of Power."³¹ This is to the enduring systems of power that were established during the colonial era. The Colonial Matrix of Power divides the world into core (developed, wealthy, often Western) and periphery (developing, economically dependent) countries, reinforcing dependency and inequality. Modern global capitalism, which emerged in this colonial context, perpetuates economic inequalities between these groups, maintaining economic control by wealthier nations over poorer ones. This structure influences who controls and profits from technology and its development, with AI largely developed by corporations and researchers in core nations.

Quijano highlights how colonialism established Western knowledge as "universal," sidelining indigenous and non-Western ways of knowing. In AI, this manifests in data collection, algorithm design, and problem-solving approaches that often exclude diverse cultural perspectives. For example, algorithms trained primarily on Western data sets may fail to understand or represent experiences and realities outside of this context, leading to biases that favor certain groups over others.

Mbembe, in his 'Necropolitics', introduced the concept of Necropolitics, which can be extended to how AI technologies can perpetuate colonial forms of control and domination over African bodies and spaces. He argues that "technology (including AI) in the context of Africa is a continuation of colonial power dynamics. Mbembe discusses how the technologies of control that were developed during colonialism are now embodied in modern technologies."³² According to Mbembe, the digital realm, rather than offering liberation or decolonization, is often a new site of domination, where African nations and peoples are subject to surveillance, economic extraction, and cultural marginalization enabled by AI technologies³³.

More than 90% of the average African person is hooked up on either Facebook, Twitter, Instagram, TikTok, YouTube, or WhatsApp. While registering in all these social media platforms, one has to provide basic information like names, emails, birthdays, location, workplace, etc. This makes it easier for a person to be tracked through AI technology. Whereas colonisation was preoccupied with wealth and labour extraction, neocolonisation, while furthering such ambitions, is indelibly implicated with forms of data extraction through surveillance.³⁴

Conclusion

The advent of artificial intelligence and its rapid adoption place Africa within a complex web of global power dynamics, often referred to as the "digital colonial matrix of power." While AI promises significant advancements in fields such as healthcare, agriculture,

³⁰ ibid

³¹ Quijano, A. 2000. *Coloniality of Power, Eurocentrism, and Latin America*. Nepantla: Views from South. 1(3), 533-580

³² Mbembe, A. 2003. "Necropolitics". *Public Culture*. 15(1), 11-40.

³³ ibid

³⁴ Anthony Downey. 2021. "The Algorithmic Apparatus Of Neo-Colonialism: Or, Can We Hold "Operational Images" To Account?" *The Nordic Journal of Aesthetics*. 61-62, pp. 78-82.

education, and finance, the reality is that much of this technology, and the data that fuels it, remains under the control of powerful foreign corporations and governments. These entities, based primarily in the Global North, can harness vast amounts of data from African users and use it to refine AI models, influence local markets, and establish digital dependencies that echo the economic and political imbalances of past colonial relationships.

The concept of a “digital colonial matrix” highlights how these imbalances manifest, often leading to the marginalization of African voices, cultures, and values in the development of AI systems. For instance, African data is frequently exported and analyzed without regard for local data sovereignty or ethical standards, creating systems that may not accurately represent or serve African societies. This unequal dynamic risks locking African nations into roles as mere data providers rather than active participants and innovators within the global AI economy. Further, the algorithms and AI tools developed from this data often reinforce stereotypes, biases, or cultural misunderstandings, as they are largely shaped by perspectives from outside Africa, reflecting the values of distant developers rather than local communities.

To negotiate this digital matrix, African countries must prioritize policies that promote data sovereignty, ethical AI practices, and local innovation. Strengthening local AI industries, investing in technological education, and developing region-specific frameworks for data governance are essential steps to ensure that Africa can harness AI in ways that align with its developmental goals and cultural values. By supporting local AI initiatives and fostering public-private partnerships that prioritize African agency, governments can help shape an AI landscape that respects the rights and dignity of its citizens.

Moreover, as global awareness of digital colonialism grows, there is an increasing call for international corporations that ensure ethical AI practices and equitable data sharing. African nations can work collaboratively, both regionally and with like-minded global partners, to advocate for transparency, accountability, and fairness in AI development and deployment. Establishing frameworks for ethical AI that address issues like data privacy, bias, and autonomy will be instrumental in shifting the global AI ecosystem towards one that values inclusivity and equity.

These notwithstanding, AI and data exploitation present both a challenge and an opportunity for Africa. The continent stands at a crossroads where it can either be subject to digital colonialism or become a leader in rethinking how data and AI can serve society inclusively. Achieving the latter will require a commitment to fostering local talent, investing in digital infrastructure, and enacting policies that protect African data from exploitation. By taking these steps, African nations can harness AI's potential as a force for empowerment rather than exploitation, contributing to a more just and balanced global digital economy. In this way, Africa has the opportunity not only to defend its digital sovereignty but also to redefine the future of AI in ways that honor its rich cultural diversity and advance its aspirations for growth, self-determination, and resilience in the digital age.

Recommendations

To counter the challenges posed by the intersection of artificial intelligence (AI) and data exploitation within Africa's digital context, the continent needs to take proactive and

strategic measures that ensure equitable, inclusive, and ethical participation in the global AI ecosystem. To do this, the paper recommends that:

1. Africa should prioritize the establishment of robust legal frameworks that assert data sovereignty and provide clear guidelines for the collection, use, and distribution of African data. These frameworks should ensure that African nations have control over their citizens' personal and collective data, preventing its exploitation by foreign corporations without adequate compensation or accountability.
2. Africa needs to build a more self-reliant and resilient AI ecosystem and invest heavily in the development of local AI talents. This includes supporting STEM education, promoting digital literacy across all levels of society, and encouraging local universities and research institutions to offer specialized programs in AI, machine learning, and data science.
3. African governments and private sectors should prioritize the establishment of AI research centers and innovation hubs across the continent. These centers would serve as incubators for local AI startups, entrepreneurs, and researchers, enabling them to collaborate on projects that address specific African challenges, such as healthcare delivery, food security, climate change, and financial inclusion.
4. Given the fragmented nature of African digital economies, regional cooperation is crucial to addressing the challenges of data exploitation and AI development. Regional bodies such as the **African Union (AU)**, **Economic Community of West African States (ECOWAS)**, and the **East African Community (EAC)** should work together to create harmonized data protection and AI policies that are consistent across borders.
5. Africa must develop ethical guidelines and standards for the deployment of AI technologies. These guidelines should be rooted in African cultural values, human rights, and social justice. Ethical considerations such as transparency, fairness, accountability, and non-discrimination should be central to AI development and deployment. African countries should be at the forefront of advocating for the ethical use of AI, ensuring that AI systems do not reinforce existing biases or perpetuate harmful stereotypes.
6. Africa should actively engage in global AI governance discussions to ensure that the continent's interests are represented and that its voice is heard in international AI policymaking forums.
7. AI presents an opportunity for Africa to modernize public service delivery, enhance governance, and drive inclusive economic growth. Governments should invest in AI tools that can improve the efficiency of public administration, healthcare, education, and transportation.
8. Africa must encourage the creation of sustainable and inclusive business models that leverage AI to drive economic growth while ensuring social benefits. These models should prioritize the creation of AI-driven solutions that are accessible to all segments of society, particularly marginalized and underserved communities.
9. In order to avoid falling into a new form of digital colonialism and exploitation, African countries must take a proactive stance in shaping the future of AI and data governance. The recommendations outlined above, ranging from strengthening legal frameworks to fostering regional cooperation and developing local AI expertise, are essential steps toward creating a more equitable, self-sufficient, and ethically grounded AI ecosystem in Africa.

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