

Opinion

"AI and Sovereignty: Navigating the Path to Africa's Digital Independence"



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The era of generative artificial intelligence has truly arrived, radically transforming the way we consume and create content. Technological giants such as OpenAI, Microsoft, Alphabet, and IBM have been at the forefront of this revolution, deploying systems capable of analyzing and synthesizing vast amounts of data to produce responses and creations that seem almost human.

These advancements are not limited to textual responses; they extend to the creation of images, music, and even the writing of computer codes. Generative AI uses deep learning techniques to learn complex patterns in data, enabling it to generate relevant and contextual responses to specific queries.

This technology opens new horizons for content creators, journalists, and publishers, allowing them to produce content at a speed and scale previously unimaginable. However, it also raises ethical questions and challenges in terms of copyright, as the distinction between human-generated and machine-generated content becomes increasingly blurred.

It is clear that artificial intelligence, highlighted by various applications such as Copilot and Gemini, represents a significant opportunity for the development of operational research in the Democratic Republic of Congo. These advanced technologies can be valuable tools for addressing and solving complex problems in many sectors.

Modern generative artificial intelligence is based on four fundamental pillars: (i) data, (ii) algorithms, (iii) machine learning, and (iv) ethics. The first three aspects are concrete and measurable, while the fourth, ethics, is more nuanced and complex. We will address this last point in more detail later. Regarding models like GPT-3 and GPT-4, we have observed a multiplication of their processing and thinking capabilities, which suggests even more

impressive advances for future generations of AI models. These developments suggest an evolution towards an increasingly sophisticated and autonomous form of intelligence. Some robotics experts believe they have increased GPT-4's capacity sixfold compared to its predecessor and estimate GPT-4's IQ at 160 using their own methods, knowing that Einstein's was 155 and that of an average person is slightly below 100. This is thought-provoking when considering what GPT-5 will be like.

The Democratic Republic of Congo, as well as Africa as a whole, where knowledge and data are often scattered, can benefit from artificial intelligence technology in various ways, particularly in the fields of education and research. Every day, thousands of documents such as dissertations, theses, and research projects are produced, but they are not systematically digitized or made digitally accessible to the public. This represents a missed opportunity in terms of data collection. Moreover, the software sector now offers the possibility to create or use algorithms capable of synthesizing these data to provide relevant answers to specific questions. Finally, thanks to entities like the National Research Fund and a dynamic community of researchers, it is possible to fund machine learning laboratories that, through interactions, can guide AI to optimize its responses generatively.

With determination, we have the ability to develop our own research systems specialized in various fields such as history, anthropology, economics, and law, disciplines where our unique perspective is essential. Similarly, in the exact sciences such as medicine, biology, and ecology, we can exploit our research specific to our context and environment. Who better than us to understand and exploit our local knowledge? The implementation of platforms for exchanging information and experiences adapted to our national context could revolutionize our ability to collaborate and innovate. Moreover, this could help eliminate plagiarism in our academic and scientific circles, thus strengthening the integrity and originality of our research work. This is what Professor Léonard Albert Kabeya Tshikuku calls "the announced primacy of the immaterial, of culture for the 21st century" in his book "Epistemology and Economic Methods; Critical Insights for Researchers in Africa."

Even better, we will have the opportunity to share, while mastering our own knowledge, with the world our thoughts, approaches, and points of view on our own environment without necessarily letting others speak for us, and sometimes not in the right way. The machine only reflects what you feed it and especially how you want it to. This is where ethics come into play.

By taking control of our knowledge, we will be able to share with the entire world our ideas, methods, and perspectives on our environment, and also ensure that our narrative – and consequently our feelings – are authentic and not distorted by others. Artificial intelligence reflects the data provided to it and processes it according to the instructions it receives, thus highlighting the crucial importance of ethics in its use.

There was a significant event a few years ago: the exclusion of a President of the Republic from a famous social networking platform. This incident caused a real shock and raised questions about the limits of authority, censorship rights, and the circumstances that justify such actions. It also highlighted ethical issues and sovereignty challenges.

Returning to artificial intelligence, the question of regulation is indeed crucial. Who is responsible for supervising and approving the responses provided by machines? The hearing of Sam Altman, CEO of OpenAI, by the US Senate last year, as well as the eagerness of European legislators to establish specific regulation for AI, clearly illustrate the concerns about the future implications of this technology. At the same time, we have

observed a similar initiative by China to establish its own legislation on the matter. These initiatives reflect a global will to define legal frameworks that ensure responsible and ethical use of AI, while anticipating the future challenges it may pose.

In the vibrant field of artificial intelligence, Europe has seen the emergence of new platforms that stand out for their energy efficiency, sometimes using fewer computing resources than traditional solutions based on Nvidia technologies. This dynamic is part of a global technological race where ethical and legislative considerations are playing an increasingly important role.

Africa, though not at the forefront of this technological battle, holds an immense potential of content that needs to be harnessed, particularly to meet the needs and aspirations of its own population. It is crucial to recognize and utilize this potential, not only to enrich the global digital heritage but also to stimulate local development through innovation and creativity. Bringing to light this treasure trove of African knowledge and experience could radically transform how the continent interacts with the rest of the world in the field of AI.

This reflection underscores the importance of including and representing Africans in the development and use of artificial intelligence to discuss Africa. Without the active participation of Africans, there is a risk that narratives generated by AI may not accurately reflect the richness and diversity of African perspectives. Therefore, it is vital that Africans are at the heart of creating and managing AI systems that concern them, to ensure that their existence and identity are affirmed and preserved in the global digital discourse.

If AI ever speaks about Africa without Africans, Descartes might have been right with this parody: "I do not think, therefore I am not."

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