

# The GLOCEPS

## Weekly Influential Brief

Research and Analysis in Governance and Ethics Pillar

### Harnessing Artificial Intelligence dividends to create job opportunities for the youth in Kenya

Stephen Nduvi and Denis Muniu



Photo credit: dig.watch

#### Executive Summary

The rapid evolution of Artificial intelligence (AI) technology can potentially transform the socio-economic livelihoods of the youth in Kenya. However, weak AI preparedness at the micro and macro level hampers the potential application of frontier technology to transform the livelihoods of the cohort. Failure to adequately tap into the positive disruptive nature of the technology has contributed to increased levels of digital violence against different societal populations in the country.

The youth can tap into vast innovations of frontier technology to create job opportunities. By harnessing the power of AI in strategic options including

the digital economy, modernizing agriculture, and the creative economy, the cohort can pivot their energies to meaningful economic development opportunities. The brief concludes that the proliferation of AI can potentially create opportunities for the youth if selectively harnessed while mitigating the associated threats.

Key recommendations include reskilling and upskilling programs for the youth in applied AI skills; empowering young people to collate and share local data for content creation digitally; enhancing awareness about AI technology prospects; promoting skill development; stimulating ethical use of AI



technology tools; integrating AI policy education into school early learning curricula; and strategic engagement and collaboration between the government and the private sector on AI infrastructure investment.

## Context

Over the past decade, there has been innovation advancement in technology including computing and deep learning that have enhanced capabilities in object recognition, predictive modeling, text, image, and video generation, and decision-making processes. This has led to the digital gathering of volumes of information over a large period enabling the prediction of events based on repeated occurrences. This has led to the re-emergence of AI, 70 years later since its existence. Statistics from Google Analytics indicate an increasing trend in consumer interest in AI use across Africa, rising by 270% in 2023. In Kenya, online searches related to Artificial intelligence (AI) increased by 400% over the last five years. The 2024 Stanford AI Index shows that 27% of Kenyans use ChatGPT daily, coming third behind India and Pakistan. Failure to adequately tap into the positive disruptive nature of the technology has contributed to increased levels of digital violence against different societal populations in the country. The enhanced prospects for the utilization of AI offer opportunities for Kenyan youth to generate employment.



At the continental level, the African Union (AU) Agenda 2063 recognizes Science, Technology, and Innovation (STI) as multi-functional tools and enablers for achieving continental development goals. The Malabo Convention, a legal framework for data protection ratified by the African Union (AU) in 2023, serves as the benchmark for AI policy in Africa. The African Union Development Agency (AUDA-NEPAD) white paper on regulation and responsible adoption of AI in Africa underpins the essence of harnessing of 4th industrial revolution (4IR) technologies to drive innovation across various economic sectors. The AU's Agenda aspires to harness the power of Africa's youth demographic dividend by investing in their education, technology and innovation skills, and entrepreneurship. At the national level, the draft Kenya National Artificial Intelligence (AI) Strategy 2025 – 2030, envisages harnessing the transformative potential of AI to drive the country's socio-economic development. The strategy will help position the country as an African leader in AI.

Harnessing the transformative power of AI has the latent to transform the digital economy in Africa's continent and in particular Kenya. The AI4D Africa opines that the technology could contribute to Africa's economic growth by \$2.9 trillion by 2030. Further, AI could boost the global economy by up to \$15.7 trillion by 2030 according to 2018 data from the World Economic Forum, creating over 58 million new jobs by 2025 globally. Generation Z (Gen Z) who are the technology natives, remain a significant demographic to be highly impacted by innovation. The youthful population has made digital technology an integral part of their daily lives, influencing how they learn, work, socialize, and consume information. However, weak AI preparedness at the micro and macro level hampers the possible application of this frontier technology





to transform the livelihoods of the demographics.

By 2030, young Africans are expected to constitute 42% of the world's youth and account for 75% of those under age 35 in Africa. The enormous demographic dividend of an energetic and innovative demographic offers immense opportunity for driving Africa's socioeconomic solutions. Particularly in Kenya, the Millennials and Gen-Z cohorts comprising approximately 55.47% of Kenya's population if not pivoted into meaningful economic activities could pose a real threat to state security through organized crimes. Currently, the cohort has significantly utilized generative technology to demand accountability from public officers, pitting the government against society. Given the tech-savvy prowess of the group, there is a need to tap into the adoption and deployment of AI technologies to meaningfully engage them in the following ways;



Photo Credit: newsday.co.ke

analytics, predictive and data visualization processes to inform real-time decision-making processes. Similarly, it is an interface for executing offline decisions via various online platforms by use of data to innovate new products and services, improve the appropriateness of existing goods and services, and re-allocate resources for efficient use. Therefore, AI is having a major impact on the digital economy and the trend is expected to continue increasing.



Photo Credit: Citizen Digital

### AI and digital economy opportunities

The digital economy is an economic system where intangible assets such as information and communication technologies play a significant role in creating, delivering, and trading goods and services. The sector is rapidly growing and is estimated to account for over 20% of global Gross Domestic Product (GDP) by 2025. The sector is characterized by the increasingly pivotal role of AI in big data

AI holds the promise of creating digital jobs, fostering innovation, and expanding access to essential and tertiary services. However, the majority of AI experts are based in the global North, with underrepresentation in the global South particularly in Africa and Kenya as well. The evolving usage of AI-based technologies presents opportunities for the youth not only to build successful careers but also to drive innovation and growth in the digital economy. Generative AI, can create new content based on existing data and user input. This includes images (Stability AI's Stable Diffusion), music (Google's Music LM), code (GitHub's Copilot), and text (Open AI's Chat GPT). The nation's digital economy is expanding quickly leading to a large number of job opportunities in industries like software engineering, web development, and digital marketing. The deployment of these applications across various industries and domains including fashion, gaming, marketing, finance, healthcare,



writing, art, software development, and product design would require technical resources where Gen Z becomes critical.

As AI becomes more accessible and widely used, there will be a proportionate rise in demand for professionals who can design, develop, test, train, deploy, and maintain systems and applications. The trend offers great employment prospects for the tech-savvy natives who find digitally enabled jobs viable and attractive. Similarly, digitally enabled jobs offer flexibility, options to work remotely, and ease of reskill through online courses, unlike traditional jobs.

However, there exist probable risks that may impede realizing the prospects of AI-based technological innovations. The nascent state of the development of the knowledge-based infrastructure hampers ease of access to advanced technology creating a digital divide disparity with the more developed countries. Other related hurdles include deficiency in digital training, cultural barriers to technology uptake, high cost of internet and electricity, and digital regulatory deficits.



### Modernizing agriculture

The major use of AI in agriculture involves machine learning (ML) enabled digital advisory services, which equip farmers with data-driven advice to adopt climate-smart farming practices and

optimize productivity. Given that agriculture accounts for over one-third of GDP and three-quarters of export earnings, its optimal digitization can potentially create employment opportunities for the youth in Kenya. However, failure to embrace technology on a large scale for real-time decision-making makes the sector highly vulnerable to environmental threats and climate shocks, such as recurrent droughts impeding the realization of its economic potential. The eminent challenges underscore the urgent need to modernize the sector through climate-smart practices.

Embracing technology and innovation in agricultural practices could transform the negative perceptions of the youth on agriculture as a non-white-collar job. While traditional farming practices discourage the youth from participating in the sector, the use of technology and innovation to resolve agricultural and environmental-related challenges such as soil infertility, drought, pests and diseases, deforestation, water scarcity, and pollution could enhance opportunities for the youth. The tech-savvy cohort can venture into developing climate-smart technologies including AI-controlled irrigation systems, portable soil testing kits, machine learning models to predict crop yields, drones with AI-powered imaging to monitor and detect crop health issues,





applications for localized weather, market and pest information, strengthening extension services, AI-powered systems for tracking and tracing produce from farm to table, and other related agricultural supply value chain services. For instance, initiatives such as the One Million Farmers Platform for accessing affordable insurance demonstrate technology's potential.

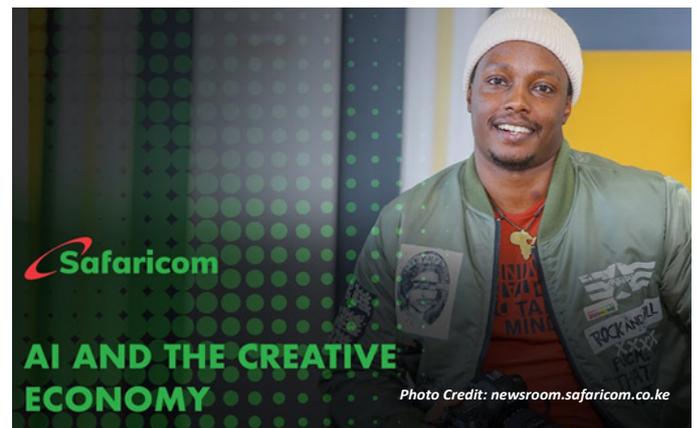


### Creative economy

Generative AI offers a paradigm shift in the creative economy by bolstering creativity and scalability of ideas from a local context. Prompt engineering of knowledge through online applications will catalyze the production of innovative, personalized content and drive innovation based on context-specific predictive analytics. The AI models will strengthen human creativity and aid users in creating videos, images, and texts by providing alternatives and suggestions to their original concepts and ideas. Therefore, there will be new opportunities for content creators, curators, editors, reviewers, and validators who can use generative AI tools to produce high-quality and original content. The applied technology can help designers develop mockups or prototypes for their product concepts, and assist writers in creating outlines, drafts, and summaries for their articles and stories.

The incubation of creative ideas is conceptualized offline but enhanced through online learning and mimicking. The AI-based technology offers a complementary surface online for sharpening and curating offline ideas. Various platforms offer personalized and adaptive learning experiences based on an individual's abilities, interests, and preferences. Personalized learning with a self-phased effort could lead to enhanced engagement and creativity capacity. The digital platforms similarly, create immersive and interactive infrastructure including chatbot tutors, virtual assistants, gamified quizzes, and virtual reality simulations that are user-friendly for enhanced interactions and innovative ideas.

However, content creation from data sets developed outside Africa, and Kenya in particular, lacks the distinct patterns and nuances specific to the local and African context. This renders the content information inadequate for producing accurate localized models. Therefore, creating



Kenyan and Africa-centric content will be significantly hampered by the absence of diverse and digital datasets. Developing and collating digital local content to provide high-quality data sets would ensure context-specific predictive analytics and content generation in Kenya's creative economy. This will intensify the fusing of AI algorithms with accurate content, and mitigate accidental algorithmic biases and discrimination in



the learned behavioral patterns.

## Conclusion

The intersection of AI and the youth presents a unique opportunity to drive the country toward a future marked by sustainable development and economic prosperity. The proliferation of AI technology can potentially create opportunities for the youthful demographics if selectively harnessed while mitigating the associated threats. The technology has the potential to have a significant positive impact on pivoting the youthful demographic into employ-

ment opportunities through the development of the digital economy.



Photo Credit: LinkedIn

## Recommendations

The Ministry of Information, Communications, and The Digital Economy should focus on;

- a) reskilling and upskilling programs for the youth on AI digital skills through regular nationwide training;
- b) spreading information and awareness about AI technology prospects and promoting skill development by engaging the community using appropriate communication language and channels;
- c) educating various users on internet safety to promote ethical use while mitigating associated risks to enhance the protection of individual privacy;
- d) integrating AI policy education into school curricula from early learning levels and involving learners in the digital technology policy formulation to create informed digital citizenship;
- e) selective engagement and collaboration between the government and the private sector to have defined plans for funding, training, and scholarships on digital technologies;
- f) empowering young people to collate and share local data for content creation in fostering a culture of innovation and creativity.



THE GLOBAL CENTRE FOR POLICY AND STRATEGY  
(GLOCEPS)

Research | Knowledge | Influence

Off Kiambu Road, Nairobi Kenya  
P.O. Box 27023-00100, Nairobi.  
Telephone: 0112401331  
Email: info@gloceps.org  
Web: www.gloceps.org

