AI Talent Readiness Index for Africa

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Qhala

QUBIT HUB

About this Study

The AI Talent Readiness Index is a flagship initiative under the Catalyzing Africa's AI Leadership project, supported by the Gates Foundation. This project addresses critical barriers to AI adoption across Africa—including talent gaps, limited institutional capacity, and fragmented policy frameworks—through four strategic pillars:

1. **Capacity Building:** AI 101 Masterclasses equip policymakers with technical and ethical insights to design AI-driven policies in healthcare, agriculture, and education.
2. **Talent Development:** The AI Talent Readiness Index maps skills gaps and infrastructure needs, guiding investments to build a workforce capable of advancing AI innovation.
3. **Access to Compute Resources:** Distributed computing systems provide startups and researchers with affordable, scalable computational power to accelerate AI development.
4. **Policy Leadership:** Ministerial Roundtables foster cross-border collaboration, positioning Africa as a unified voice in global AI governance and ethical standards.

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The field of artificial intelligence is rapidly evolving, and technologies, regulations, and best practices may change over time. The information presented in this Report reflects our understanding as of the publication date (2nd April 2025) and may require updates as the AI landscape advances.

The examples, case studies, and recommendations provided in this Report are intended to serve as general guidance. They may need to be adapted to specific national contexts, legal frameworks, cultural norms, or local infrastructure conditions. Users of this Report should consult relevant national authorities, legal counsel, and technical experts when developing or implementing AI readiness strategies.

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This Report is intended to be a living document that will be periodically revised to reflect new developments in AI talent ecosystems, technological advancements, and policy innovations. Users are encouraged to refer to the most recent version available and to contribute insights for continuous improvement.

Foreword

For years, alongside a bold community of Pan-African builders, we've championed one truth: Africa must build before it regulates. In a world racing to define the future of AI, we cannot afford to lead with policies written in abstraction. We must begin with the fundamentals—data, infrastructure, markets, and talent. This AI Talent Readiness Index turns that belief into action: a first-of-its-kind tool, built by Africans for Africans, mapping our readiness across all 54 nations to develop, retain, and deploy AI talent.

Chinua Achebe once said, *"Until the lion learns to tell its own story, the tale of the hunt will always glorify the hunter."* This Index is that story—an African narrative of AI grounded in data, regional nuance, and unapologetic ambition.

The findings are clear. North Africa leads in readiness, powered by solid educational infrastructure and strategic policy shifts. East Africa shows the fastest momentum, with countries like Rwanda, Kenya, and Mauritius charting unique paths through governance innovation and mobile-first infrastructure. Southern Africa benefits from South Africa's leadership in digital skills, while West Africa's startup dynamism reveals unrealized potential. Central Africa, though facing the steepest challenges, also presents an urgent opportunity to build from the ground up.

Yet the story is not just about rankings. It's about systems. Talent exists across the continent—but raw potential without supportive structures is not a strategy. Universities cannot teach AI when they lack stable electricity. Policy cannot move the needle if it's written without voices from the grassroots. Investors cannot keep chasing the familiar while teens in Gambia are training models on Raspberry Pis.

That's why this Index isn't just a diagnosis—it's a blueprint. For the first time, we've tailored strategic recommendations for every African country and proposed four key continental interventions:

1. **A unified AI education initiative to equip youth across all learning levels.**
2. **Ambitious, shared training targets—reaching 15% of the population by 2028.**
3. **Transforming higher education to train 5,000 PhD-level AI researchers.**

4. **Specialized training pathways to produce 1 million AI professionals continent-wide.**

We believe regionalism is Africa's edge. North Africa's institutions, East Africa's policy agility, Southern Africa's technical base, West Africa's entrepreneurial spirit, and Central Africa's emerging human capital are not separate silos—they are building blocks of a continental movement. When we act regionally, we scale faster, build smarter, and lead together.

This is what #DoHardThings looks like. We name our truths, confront our constraints, and do the work. Africa's genius has always been born of necessity—but for AI to serve our people, necessity must now meet intentionality. We need curricula in Kiswahili and Yoruba. Infrastructure built for Accra's outages. Policies co-designed with Rwandan farmers. And investments rooted in long-term belief, not short-term bets.

With AI poised to add $2.9 trillion to Africa's economy by 2030, creating 500,000 jobs annually and lifting millions out of poverty, we cannot afford to wait. This Index is not just a report—it's a gauntlet thrown.

Build. Adapt. Bet on Africa's brilliance.

#DoHardThings isn't a hashtag—it's our DNA. Let's rewrite the story. On our terms.

Dr. Shikoh Gitau, CEO & Founder, Qhala

Definition of Terms

Index Structure

AI Talent Readiness Index: A measurement and results framework designed specifically for the African context that assesses countries' capacity to develop, retain, and deploy artificial intelligence talent by evaluating performance across three pillars: Digital Skills (40%), Data & Infrastructure (35%), and Government Readiness (25%).

Pillar: A dimension of AI talent readiness that encompasses a cluster of related indicators. The index consists of three pillars weighted according to their relative importance for AI talent development in Africa.

Indicator: A specific metric used to measure performance within each pillar, selected based on relevance to AI talent development, data availability, and alignment with established measurement frameworks.

Weighting: The relative importance assigned to each pillar and indicator within the index, determined through expert analysis and reflecting prioritization of factors most critical for AI talent development in Africa.

Pillar 1: Digital Skills

Adult Literacy Rate: The percentage of the population aged 15 and above who can read, write, and understand a simple statement related to everyday life, serving as a foundation for digital skills development.

Labor Force with Advanced Education: The percentage of the workforce that has attained tertiary education, representing the pool of potential advanced technical talent.

ICT Skills in the Education System: The extent to which digital competencies are integrated into educational curricula and teaching methodologies across primary, secondary, and tertiary levels.

Share of Female Graduates in STEM Courses: The percentage of graduates in Science, Technology, Engineering, and Mathematics fields who are women, reflecting gender diversity in technical education.

Prevalence of Gig Economy: The percentage of the workforce engaged in digital platform work, reflecting alternative pathways for skills development and practical digital experience.

Developers per Million Population: The number of professional software developers relative to population size, indicating technical talent density within a country.

Institutions of Higher Learning Teaching AI/ML: The number of universities and specialized institutions offering formal artificial intelligence and machine learning programs.

Pillar 2: Data & Infrastructure

Individuals Using the Internet: The percentage of the population with access to and regularly using internet services, a fundamental prerequisite for AI skills development and application.

Electricity Penetration: The percentage of the population with access to reliable electricity, essential for powering digital devices and AI infrastructure.

GSMA Mobile Connectivity Index Ranking: A composite score evaluating the quality, performance, and affordability of mobile networks, reflecting a country's mobile infrastructure development.

Data Governance: The frameworks, policies, and practices established to ensure the ethical, secure, and efficient management of data resources.

Level of Trust in Digital Technologies: Public confidence in digital systems and willingness to adopt new technologies, measured through surveys and adoption patterns.

Population Covered by 3G Mobile Network: The percentage of the population with access to at least 3G mobile internet connectivity, enabling basic digital participation.

Computer Software Spending: National investment in software tools and platforms as a percentage of GDP, reflecting resource allocation for technical infrastructure.

Pillar 3: Government Readiness

National AI Strategy: A published, comprehensive government plan specifically addressing artificial intelligence development, application, and governance.

Data Protection & Privacy Legislation: Legal frameworks establishing rules for personal data collection, storage, processing, and sharing.

Government Promotion of Investment in Emerging Tech: Policies and programs designed to attract and stimulate investment in technology sectors, including incentives and innovation funding.

Regulatory Quality: The ability of governments to formulate and implement sound policies and regulations that permit and promote private sector development, as measured by the Worldwide Governance Indicators.

Foundational IT Infrastructure: Government digital systems, e-services, and technical capacity as measured by the GovTech Maturity Index.

Government Effectiveness: The quality of public services, civil service performance, and policy implementation capacity as measured by the Worldwide Governance Indicators.

Regional Classifications

North Africa: Algeria, Egypt, Libya, Morocco, Tunisia, Sudan

East Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Tanzania, Uganda

Southern Africa: Angola, Botswana, Eswatini, Lesotho, Mozambique, Namibia, South Africa, Zambia, Zimbabwe

West Africa: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Mauritania

Central Africa: Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of Congo, São Tomé and Príncipe

Technical Terminology

Artificial Intelligence (AI): Computer systems designed to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation.

Machine Learning (ML): A subset of AI focused on developing algorithms that improve automatically through experience and data analysis.

AI Talent: Individuals with the technical skills, domain expertise, and problem-solving abilities needed to develop, deploy, maintain, and govern AI systems.

AI Ecosystem: The interconnected network of stakeholders, resources, policies, and infrastructure that enables AI development and deployment within a country or region.

Fourth Industrial Revolution: The ongoing transformation of traditional manufacturing and industrial practices through integration of smart technology, characterized by the fusion of digital, biological, and physical innovations.

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Executive Summary

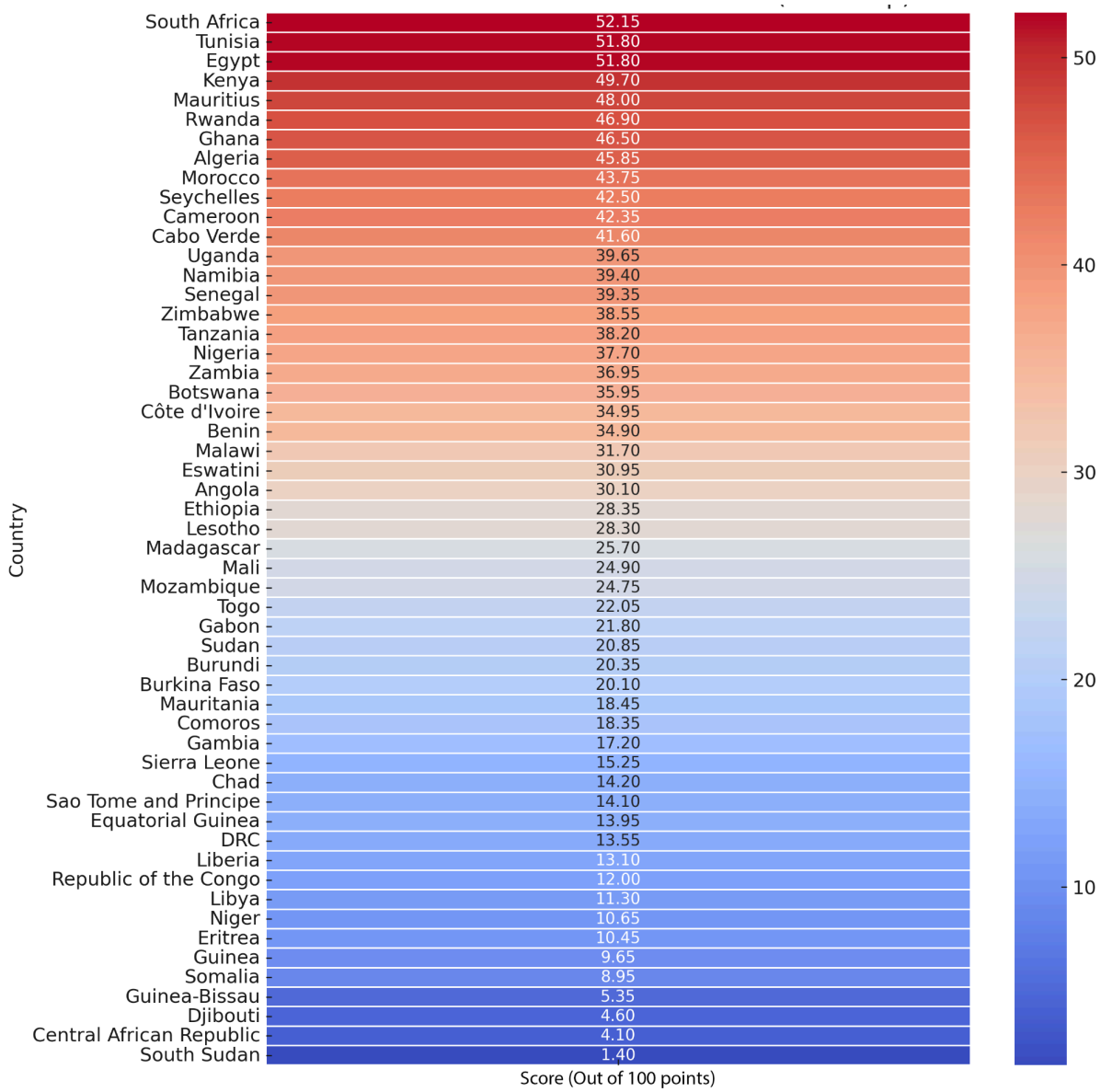

Figure 1: AI Talent Readiness Index for Africa (Heatmap)

The AI Talent Readiness Index provides the first comprehensive assessment - by Africans for Africans - of the continent's capacity to develop, retain, and deploy artificial intelligence talent across all 54 countries. Drawing from 20 international data sources, this index measures three critical dimensions: Digital Skills (40% weight), Data & Infrastructure (35%

weight), and Government Readiness (25% weight). With few AI professionals currently working across the continent, addressing Africa's talent gap is essential to harness the technology's potential $2.9 trillion economic impact by 2030.

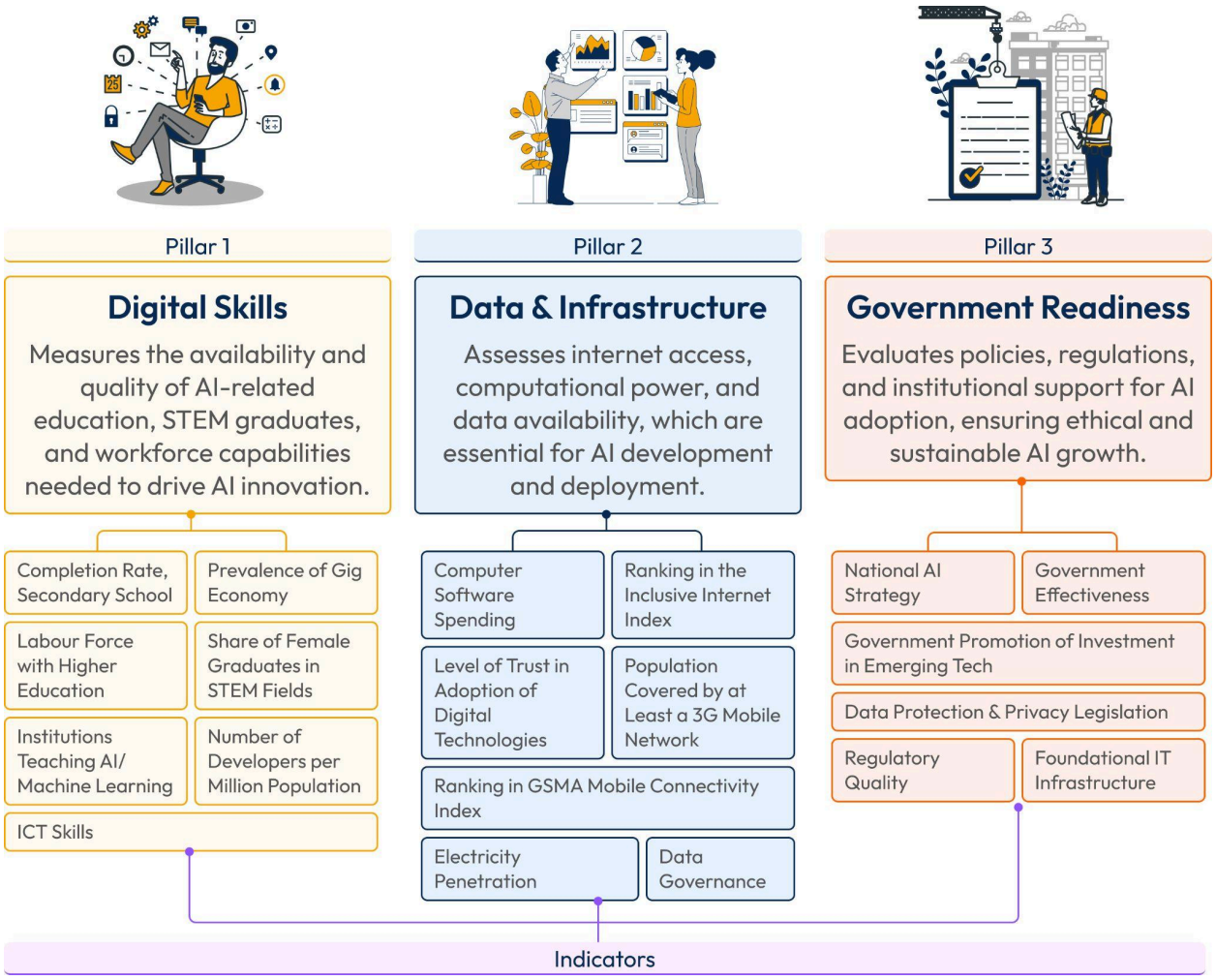

Figure 2: The three pillars of the AI Talent Readiness Index for Africa: Digital Skills, Data & Infrastructure, and Government Readiness.

North Africa demonstrates the strongest overall readiness (regional average: 38.2/100 points), with Tunisia, Egypt, Algeria, and Morocco all ranking in the top 10 continent-wide. This strength is largely driven by the region's advanced educational infrastructure with 85 institutions dedicated to AI and machine learning—Egypt leading with 40, Algeria with 22, Tunisia with 11, Morocco with 7, and Libya with 5. Developer density is also notably high, particularly in Tunisia, which boasts 4,120 developers per million people, followed by

Morocco (1,345), Egypt (1,224), and Algeria (477). Additionally, North African countries have systematically integrated ICT skills into education, with Tunisia leading at 71.37%, followed by Morocco (60.86%), Algeria (58.48%), and Egypt (53.06%). These factors, combined with high electricity penetration and increasingly strategic government approaches to digital transformation, provide a strong foundation for AI talent development. However, substantial disparities persist, as evidenced by Libya's dramatic underperformance (rank 46), where prolonged conflict has eroded previously developed capacities.

East Africa exhibits the most dynamic development trajectory (regional average: 32.7 points), with Kenya (rank 4), Mauritius (rank 5), and Rwanda (rank 6) pioneering distinctive approaches to talent ecosystem development. Rwanda's exceptional governance readiness (ranking 1st in that pillar) demonstrates how strategic policy choices can overcome resource constraints, while the region's mobile-first infrastructure innovations offer scalable models for broader adoption. However, East Africa also contains the continent's widest internal disparities, with Somalia, Eritrea, and South Sudan ranking among the lowest performers.

Southern Africa benefits from South Africa's continental leadership (rank 1 overall, scoring 52.15 points) and relatively developed infrastructure networks (regional average: 35.3 points). The region demonstrates particular strength in digital skills development, with higher education systems producing specialized technical talent, yet faces challenges in extending these capabilities beyond urban centers and top-performing nations.

West Africa shows consistent mid-tier performance (regional average: 27.6 points) with Ghana (rank 7) leading through balanced development across all pillars. Nigeria's performance (rank 18) particularly warrants attention given its economic size and vibrant startup ecosystem, suggesting substantial unrealized potential through targeted policy interventions, especially in education and governance frameworks.

Central Africa faces the most significant readiness challenges (regional average: 19.4 points), with only Cameroon (rank 11) demonstrating competitive performance. The region requires fundamental interventions across all dimensions, particularly in electricity access, connectivity infrastructure, and governance capacity, to build viable AI talent ecosystems.

Based on these findings, we propose four strategic interventions that can be adopted across all five regions of Africa, ensuring a continent-wide approach to strengthening AI talent readiness. These recommendations are designed to be implemented by both state

and non-state actors, addressing key challenges and opportunities that span North, West, East, Central, and Southern Africa:

1. **Establish a continent-wide AI education initiative, inclusive of curriculum development and targeting youth at all levels of education, to meet the needs of learners and increase the supply of AI education opportunities across the continent.**

2. **Implement collaborative training targets whereby each Signatory State commits to train over 15% of its population on AI awareness by 2028, building towards over 200 million people trained across the African continent.**

3. **Transform higher education capacity by ensuring that over 30 higher learning institutions adapt curricula to provide state-of-the-art and globally competitive AI skills, establishing the capacity to train 5,000 PhD researchers across Africa.**

4. **Develop specialized training pathways through programs on AI literacy, advanced machine learning and technical training, entrepreneurship, specialized research, and governance to produce 1 million AI practitioners (agent developers, data analysts, and data scientists).**

The AI Talent Readiness Index reveals both significant challenges and promising foundations for Africa's participation in the Fourth Industrial Revolution. By leveraging regional strengths—North Africa's educational infrastructure, East Africa's policy innovation, Southern Africa's technical expertise, West Africa's entrepreneurial dynamism, and Central Africa's emerging human capital—while systematically addressing identified gaps, the continent can bridge its AI talent deficit. Implementation of the four recommended actions would transform Africa's position in the global AI landscape, ensuring that the projected $2.9 trillion economic opportunity translates into inclusive growth and meaningful employment for millions of Africans.

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1. Introduction

1.1. Background and Context of the Study

Fundamentally, modern advanced AI systems are developed through training models with vast amounts of data and significant computational resources. When assessing Africa's potential to create leading AI technologies, debates often emphasize scaling physical infrastructure—such as semiconductor production, data center development, and stable electricity supply—to meet technical demands. Yet human expertise is equally pivotal to advancing the AI sector. Skilled professionals design algorithms, train models on datasets, pioneer innovative hardware, and manage the data centers critical to AI operations. Consequently, the availability of AI talent—the human capital essential for building these systems—is a key factor in evaluating the viability and competitiveness of Africa's AI ecosystem.

AI Talent Readiness measures a nation's capacity to cultivate, retain, and deploy the human capital necessary to develop, adapt, and scale AI systems. Unlike other frameworks[1] that silo "software" and "hardware" talent, a holistic readiness index must account for the interconnected ecosystem in which AI operates—spanning technical expertise, infrastructure accessibility, and governance frameworks. This is particularly critical in Africa, where systemic gaps in foundational infrastructure and policy coherence amplify the need for a multidimensional approach.

To measure AI talent readiness is to map the invisible threads that connect human potential to technological progress. It is not merely about counting engineers or coders but understanding how a nation's people, infrastructure, and policies converge to create an ecosystem where innovation can thrive. In Africa, this convergence is uniquely complex. Unlike regions where advanced infrastructure and stable governance are assumed, Africa's journey toward AI leadership is fraught with systemic gaps—uneven electricity access, fragmented digital connectivity, and nascent policy frameworks. Yet within this complexity lies opportunity: the chance to redefine readiness not as a race to mimic global benchmarks, but as a tailored blueprint for self-reliance.

[1] Council for Economic Advisers, January 14th, 2025, https://bidenwhitehouse.archives.gov/cea/written-materials/2025/01/14/ai-talent-report/

The Council of Economic Advisers (CEA's)[2] distinction between "software" and "hardware" talent offers a useful starting point but falters in Africa's context. Consider the software engineer in Nairobi designing an AI model to predict crop yields. His work depends not just on his coding skills but on the mobile networks that deliver real-time data to farmers, the electricity that powers her laptop during rolling blackouts, and the government policies that ensure his algorithms respect data privacy. Similarly, the technician maintaining a solar-powered data center in Rwanda bridges hardware and software realms, ensuring both the physical infrastructure and the AI models it hosts remain functional. In Africa, talent cannot be siloed into neat categories—it is shaped by the environment in which it operates.

This is why our AI Talent Readiness Index rests on three interdependent pillars. Digital Skills form the bedrock, capturing not just the number of graduates but the quality of their training and the inclusivity of their pathways. Metrics like ICT proficiency and developer density reflect Africa's growing cadre of software talent, while the share of female STEM graduates underscores the urgency of dismantling barriers that exclude half the population from shaping AI's future. Yet skills alone are insufficient. Data & Infrastructure—the second pillar—acknowledges that even the brightest minds cannot innovate in the dark. Electricity penetration, mobile connectivity, and data governance are not mere technicalities; they are the lifelines that transform theoretical knowledge into practical solutions. A developer in Lagos may have world-class coding skills, but without reliable internet or power, her ability to contribute to global AI advancements is stifled.

The third pillar, Government Readiness, is often overlooked in global talent frameworks but is perhaps the most decisive in Africa. Rwanda's rise to the top of this pillar—with its clear national AI strategy and agile regulatory environment—demonstrates how policy can compensate for resource constraints. Conversely, nations like South Sudan, trapped in cycles of instability, remind us that governance vacuums erode talent retention. When governments fail to prioritize AI education, protect intellectual property, or incentivize private-sector investment, they inadvertently fuel a brain drain, exporting the very talent needed to build local ecosystems.

[2] Council for Economic Advisers, January 14th, 2025, https://bidenwhitehouse.archives.gov/cea/written-materials/2025/01/14/ai-talent-report/

Critics might argue that infrastructure metrics like electricity penetration belong in a separate index. But this misunderstands Africa's reality. In regions where 52%[3] of the population lacks electricity, talent readiness cannot be divorced from the ability to keep the lights on. Similarly, mobile connectivity is not a luxury but a necessity in a continent where 84% of internet users rely on smartphones. By integrating these factors, our index rejects the artificial divide between "hardware" and "software" readiness, insisting instead on a holistic view.

The stakes are high. Africa's youth bulge—60% under age 25[4]—presents a demographic dividend that could power the continent's AI ambitions. But without intentional investment in digital skills, infrastructure, and governance, this dividend risks becoming a crisis of unmet potential. The AI Talent Readiness Index is more than a diagnostic tool; it is a call to action. It challenges policymakers to see beyond isolated interventions and embrace systemic solutions—to recognize that training 5,000 PhDs[5] means little if universities lack reliable power, or that cutting-edge algorithms cannot thrive in regulatory voids. In the end, Africa's AI future will not be built by chasing global benchmarks but by forging a path that honors its unique challenges and strengths. This index is not a report card but a roadmap—one that insists talent readiness is inseparable from the systems that sustain it. To ignore this interdependence is to risk building castles on sand. To embrace it is to lay the foundation for an AI revolution that is not only African-led but African-defined.

Africa indeed stands at a critical technological crossroads. As the Fourth Industrial Revolution accelerates globally, the continent faces a significant talent deficit in artificial intelligence: Israel has 9.5 times more software engineering professionals per capita than South Africa, 40 times Nigeria's and 170 times Ethiopia's per capita supply[6]. This talent pool is unevenly distributed, concentrated primarily in a few urban hubs while vast regions have minimal AI expertise. Despite this challenge, the potential rewards are substantial: recent

[3] UN Trade & Development; *Commodities at a glance: Special issue on access to energy in sub-Saharan Africa.* United Nations Conference on Trade and Development. Retrieved from https://unctad.org/publication/commodities-glance-special-issue-access-energy-sub-saharan-africa

[4] World Economic Forum. (2023, August 16). *How Africa's youth will drive global growth.* Retrieved from https://www.weforum.org/stories/2023/08/africa-youth-global-growth-digital-economy/

[5] Ruwoko, E., (2025). *5,000 PhD scholars to meet Africa's growing AI needs.* Artificial Intelligence for Development. Retrieved from https://ai4d.acts-net.org/5000-phd-scholars-to-meet-africas-growing-ai-needs/

[6] AI4D; March 2024, AI in Africa: The state and needs of the ecosystem; https://cdn.prod.website-files.com/620b3700f2c761fd986be9f5/66c2f7d1ac47b65500e400ef_SKILLS_FINAL.pdf

estimates suggest that AI implementation could increase Africa's economy by $2.9 trillion by 2030, representing a 3% annual GDP boost that could lift 11 million people out of poverty and create 500,000 jobs annually[7].

Africa is currently the only continent without an AI readiness index tailored to its specific development context. Existing global indices often fail to capture the nuances of African digital ecosystems, particularly the continent's mobile-first connectivity landscape, unique infrastructure challenges, and diverse governance systems[8]. This gap in measurement tools limits the ability of policymakers, investors, and educational institutions to make informed decisions about AI talent development.

Addressing this measurement gap, Qubit Hub's "Made in Africa[9]" framework has identified four critical pillars for functioning AI ecosystems: Talent, Data Sets and Data Systems, Digital Infrastructure, and AI Markets. Among these, talent development stands as the cornerstone, essential for driving the entire AI value chain from conception to deployment. This study builds upon this framework to create Africa's first comprehensive AI Talent Readiness Index, providing a continental benchmark for workforce preparedness.

1.2. Purpose and Objectives of the Report

This report aims to systematically assess, measure, and compare AI talent readiness across all 54 African countries, providing an evidence-based tool for policy formulation and strategic investment in human capital development. The specific objectives include:

1. **Establishing a baseline measurement of AI talent readiness across Africa using standardized indicators and methodologies;**

[7] African Telecommunication Union. (2024). *Africa's ICT Day places sharp focus on continent's paltry 2.5% share of the trillion-dollar global AI market.* Retrieved from https://atuuat.africa/africas-ict-day-places-sharp-focus-on-continents-paltry-2-5-share-of-the-trillion-dollar-global-ai-market/

[8] Baguma, R., Mkoba, E., Nahabwe, M., Mubangizi, M.G., Amutorine, M., Wanyama, D. (2023). Towards an Artificial Intelligence Readiness Index for Africa. In: Ndayizigamiye, P., Twinomurinzi, H., Kalema, B., Bwalya, K., Bembe, M. (eds) Digital-for-Development: Enabling Transformation, Inclusion and Sustainability Through ICTs. IDIA 2022. Communications in Computer and Information Science, vol 1774. Springer, Cham. https://doi.org/10.1007/978-3-031-28472-4_18

[9] Gitau, S.. , Lemayian., D, Kitonga, K.,Baru, J., Chege, B., Mburu, W, Mwenda, T., Ngaruiya, N., & Powers, W. (2024, February 14). Made in Africa: An African perspective to the design, deployment and governance of AI – Part 1: The four horsemen of AI in Africa: https://qbit.africa/research/made-in-africa/

2. **Identifying strengths, weaknesses, and specific gaps in digital skills, data infrastructure, and government readiness in each country;**
3. **Providing actionable recommendations for policymakers, educational institutions, and private sector stakeholders to enhance AI talent development;**
4. **Creating a framework for ongoing measurement and comparison of AI talent readiness to track progress over time;**
5. **Facilitating knowledge-sharing and best practice exchange between African nations and regions at different stages of AI readiness.**

By mapping the current state of AI talent preparedness, this index serves as both a diagnostic tool and a roadmap for building Africa's capacity to participate meaningfully in the global AI ecosystem, ensuring the technology's benefits are harnessed to address the continent's most pressing development challenges.

This study provides a comprehensive assessment of AI talent readiness across all 54 African countries, organized into three key pillars that collectively determine a nation's capacity to develop and deploy AI talent.

Pillar 1: Digital Skills

The Digital Skills pillar evaluates countries' foundational and specialized capabilities necessary for engaging with and contributing to AI technologies. It encompasses the complete talent pipeline from basic digital literacy through advanced technical competencies required for AI development, deployment, and management. This pillar recognizes that human capital development forms the cornerstone of AI readiness, reflecting the need for both breadth (widespread digital literacy) and depth (specialized AI expertise) in workforce development.

The assessment examines formal educational attainment (secondary completion, higher education, and specialized AI/ML programs), technical capacity (ICT skills and developer density), workforce diversity (female representation in STEM), and labor market dynamics (gig economy prevalence) to provide a holistic view of each country's digital skills landscape.

Pillar 2: Data and Infrastructure

The Data and Infrastructure pillar measures the technological foundations that enable AI development and deployment. This dimension recognizes that even highly skilled workforces cannot effectively implement AI without reliable electricity, connectivity, and data governance frameworks. The pillar reflects Africa's unique infrastructure context—particularly its mobile-first connectivity landscape—while assessing critical enablers for AI operations.

The assessment evaluates physical infrastructure (electricity access and mobile network coverage), digital access (internet penetration and connectivity quality), data environments (governance frameworks and public trust), and technical investments (software spending) that collectively determine a country's capacity to support AI talent utilization.

Pillar 3: Government Readiness

The Government Readiness pillar examines the policy and regulatory environments that shape AI talent development and utilization. This dimension acknowledges that strategic vision, effective governance, and enabling regulations are essential for creating ecosystems where AI talent can flourish. The pillar assesses both AI-specific policy frameworks and broader governance capacities that influence technology adoption.

The assessment evaluates strategic planning (national AI strategies), implementation capacity (government effectiveness), innovation support (investment promotion in emerging technologies), regulatory environments (quality and predictability), technical foundations (IT infrastructure), and data protection frameworks (privacy legislation) that collectively determine a country's governance readiness for AI talent development.

2. Methodology

The study seeks to answer the following key questions:

1. **What is the current state of AI talent readiness across African countries?**
2. **How do digital skills, data infrastructure, and government policies influence AI talent development?**
3. **What are the major barriers preventing AI talent growth in Africa?**

This research employs a rigorous quantitative approach to develop an AI Talent Readiness Index tailored to the African context. However, the study acknowledges several limitations and delimits its scope to ensure focus and feasibility.

2.1. Limitations

The inherent nature of the data and the methodological choices present certain challenges. Firstly, the study relies on AI-related datasets that exhibit significant variability in definitions and reporting standards across different countries. This inconsistency poses a substantial obstacle to cross-country comparability and could potentially lead to skewed interpretations of AI talent readiness. To mitigate this, data harmonization techniques, including Min-Max scaling and z-score normalization, are implemented alongside the use of internationally recognized indices. While these methods aim to create a more uniform basis for comparison, it is recognized that some discrepancies may persist.

Secondly, despite the study's aim to provide a contextually relevant index for Africa, it faces the challenge of applying uniform weightings across 54 diverse countries. This approach, while ensuring methodological consistency, may not fully account for localized disparities in digital skills, infrastructure, and policy environments. While acknowledging the inherent limitations of uniform weighting, it establishes a foundational framework for future contextual evolution. Subsequent iterations of the index could explore adaptive weighting mechanisms to better reflect these variations.

Thirdly, the rapidly evolving AI policy landscape presents a dynamic challenge. Findings may become outdated due to new policies or regulations enacted during the study period. To address this, a rolling data update approach is adopted, allowing for the incorporation of significant policy changes as they arise, thereby enhancing the relevance and accuracy of the findings over time.

Moreover, this study's reliance on the 'Number of Developers per Million Population – Software development capacity' metric, which primarily reflects formal tertiary attainment, presents a limitation. In numerous African contexts, a substantial pool of AI developers acquires skills through informal learning and practical experience, bypassing traditional educational pathways. Consequently, this study may underestimate the true software development capacity in these regions. Future research should explore methodologies that incorporate these contextual realities to provide a more comprehensive assessment.

Despite these challenges, the AI Talent Readiness Index remains the most comprehensive public effort to assess Africa's AI talent ecosystem. By providing data-driven insights, it enables policymakers, investors, and educational institutions to identify priority areas for intervention, ensuring Africa's workforce is prepared to leverage AI for sustainable development and economic growth.

2.2. Delimitations

To ensure focus and feasibility, the study has made several deliberate scope choices. Firstly, while acknowledging the potential for qualitative insights to enrich the understanding of AI talent readiness, this study strictly adheres to a quantitative methodology. This decision prioritizes empirical rigor, ensuring that assessments remain measurable and free from subjective interpretations that qualitative data might introduce.

Secondly, the study relies exclusively on publicly accessible datasets sourced from the internet. This commitment to transparency and replicability is crucial. However, it is recognized that proprietary or unpublished data might offer deeper insights into specific aspects of AI development that are not captured by publicly available sources.

Thirdly, to mitigate expert bias in data validation and interpretation, a structured Delphi process is employed. This process is characterized by anonymized rounds and controlled feedback loops, fostering a balanced consensus among panel members while minimizing the influence of dominant voices. By ensuring that all expert opinions are considered equitably, the study enhances the credibility and reliability of its findings.

2.3. Data Collection and Standardization

The study employs a quantitative approach, relying exclusively on measurable indicators to assess AI talent across Africa.

The dataset selection methodology for this index adheres to the Organisation for Economic Co-operation and Development (OECD) Handbook on Constructing Composite Indicators (2005)[10] and the European Union's Composite Indicators & Scoreboards Explorer framework[11], emphasizing five cardinal principles: analytical coherence, policy alignment,

[10] **OECD. (2005).** *Measuring globalisation: OECD handbook on economic globalisation indicators.* OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports/2005/05/measuring-globalisation_g1gh5a24/9789264108103-en.pdf

[11] **Joint Research Centre. (n.d.).** *Composite indicators explorer*. European Commission. Retrieved [Month Day, Year], from https://composite-indicators.jrc.ec.europa.eu/explorer

cross-national comparability, geographical coverage, and contextual specificity to Africa's AI development landscape. This approach ensures the index balances theoretical grounding with actionable insights while addressing the continent's unique technological trajectory.

The theoretical architecture aligns with Qubit's "Made in Africa"[12] framework through three interconnected pillars. Digital Skills metrics leverage the World Bank Gender Data Portal[13] tracking female STEM graduates and EduRank's global university rankings[14] to map human capital development – critical for equitable AI talent pipelines. The Data & Infrastructure dimension incorporates the GSMA Mobile Connectivity Index[15] and World Bank electricity access statistics[16] to quantify Africa's infrastructure paradox, where 72% of sub-Saharan populations lack stable electricity despite 84% mobile network coverage. Government Readiness assessments draw from the Oxford Insights Government AI Readiness Index 2023[17] and UNCTAD's global privacy legislation tracker[18] to evaluate policy frameworks shaping ethical AI adoption.

Policy relevance is ensured through metrics like the Global Data Barometer[19] assessing data governance maturity and the GovTech Maturity Index[20] benchmarking public sector digitalization – both critical for informing regulatory reforms. Global benchmarks such as the Cisco 2024 AI Readiness Index[21] and Oxford Network Readiness Index[22] provide external reference points, while localized datasets like Tunga's African software developer

[12] Gitau, S. (PhD). , Lemayian., D, Kitonga, K.,Baru, J., Chege, B., Mburu, W. (PhD), Mwenda, T., Ngaruiya, N. (PhD), & Powers, W. (2024, February 14). Made in Africa: An African perspective to the design, deployment and governance of AI – Part 1: The four horsemen of AI in Africa: https://qbit.africa/research/made-in-africa/
[13] World Bank; Gender Data Portal; https://genderdata.worldbank.org/en/home
[14] Edurank; List of 100 Best Universities in Africa; https://edurank.org/geo/af/
[15] GSMA Mobile Connectivity Index; https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2024/06/GSMA-MCI-Methodology-Report-2024.pdf
[16] World Bank Group; Access to electricity (% of population); https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS
[17] Oxford Insight, AI Readiness; https://oxfordinsights.com/ai-readiness/
[18] UN trade & development; Data Protection Privacy Legislation Worldwide; https://unctad.org/page/data-protection-and-privacy-legislation-worldwide
[19] Global Data Barometer, Data for Public Good; https://globaldatabarometer.org/
[20] GovTech Maturity Index, Deceember 2022; https://cdn.www.gob.pe/uploads/document/file/4078650/GovTech%20Maturity%20Index.pdf
[21] Cisco 2024 AI Readiness Index; https://www.cisco.com/c/m/en_us/solutions/ai/readiness-index.html
[22] Portulans Institute, Network Readiness Index 2024; https://networkreadinessindex.org/

analysis[23] contextualize regional talent distribution patterns in the continent's $12.5 billion IT outsourcing market.

Methodological rigor is maintained through established sources including World Bank governance indicators[24] and the Economist Impact Inclusive Internet Index[25], which employ standardized metrics validated through peer-reviewed methodologies. Contextual specificity is achieved by prioritizing Africa's mobile-first reality – the index incorporates 3G/4G coverage statistics reflecting that 68% of African internet users access via mobile devices, alongside metrics on gig economy prevalence from the Network Readiness Index that capture informal sector dynamics driving digital skills acquisition.

Geographic comprehensiveness is ensured through full coverage of all 54 African nations, utilizing pan-continental datasets like the UNIDIR AI Policy Portal[26] tracking national AI strategies. Temporal consistency is maintained via annually updated sources, enabling longitudinal analysis of progress against the African Union's Digital Transformation Strategy[27] targets. This balanced approach combines global reference frameworks with localized insights, exemplified by contrasting the Cisco AI Readiness Index's[28] enterprise adoption metrics with Tunga's[29] granular analysis of regional developer ecosystems – creating a multidimensional assessment tool tailored to Africa's distinct AI readiness challenges and opportunities.

Quantitative data for this analysis draws from comprehensive indices[30] including the Oxford Insights Government AI Readiness Index 2023 assessing national AI capabilities, Cisco's AI Readiness Index evaluating enterprise adoption, and the University of Oxford's

[23] Tunga (2023), African Software Developers: Best countries for outsourcing in 2023; https://tunga.io/african-software-developers/

[24] World Bank Grouop; Worldwide Governance Indicator; A global compilation of data capturing household, business, and citizen perceptions of the quality of governance in more than 200 economies. https://www.worldbank.org/en/publication/worldwide-governance-indicators

[25] Economist Impact, The Inclusive Internet Index; https://impact.economist.com/projects/inclusive-internet-index/

[26] Artificial Intelligence Policy Portal; https://aipolicyportal.org/

[27] African Union, Digital Transformation Strategy for Africa (2020-2030); https://au.int/sites/default/files/documents/38507-doc-dts-english.pdf

[28] Cisco 2024 AI Readiness Index; https://www.cisco.com/c/m/en_us/solutions/ai/readiness-index.html

[29] Tunga (2023), African Software Developers: Best countries for outsourcing in 2023; https://tunga.io/african-software-developers/

[30] Ibid

Network Readiness Index measuring digital infrastructure maturity. Educational metrics incorporate the World Bank Gender Data Portal tracking STEM graduates by gender and EduRank's global computer science university rankings. Connectivity analyses utilize the Economist Impact Inclusive Internet Index and GSMA Mobile Connectivity Index, supplemented by energy access data from World Bank electricity penetration statistics. Governance dimensions integrate the Global Data Barometer on data ecosystems, UNIDIR AI Policy Portal tracking regulatory frameworks, and World Bank Worldwide Governance Indicators assesses institutional effectiveness. Sector-specific insights derive from Tunga's African software developer analysis and UNCTAD's global privacy legislation tracker, with public sector digitalization benchmarks from the World Bank GovTech Maturity Index.

To ensure comparability across diverse indicators, all data were normalized using min-max scaling, which transforms values to a 0-100 scale where 0 represents the minimum observed value and 100 represents the maximum observed value. This method preserves the relative distances between original values while creating a common scale for aggregation.

Missing data for any indicator is assigned a score of zero. This decision ensures that the Index remains consistent and comparable across all 54 African countries, even when data availability is uneven. While this approach may penalize countries with limited data reporting, it reflects the importance of comprehensive data collection and transparency in assessing AI readiness. By assigning a zero score, the Index emphasizes the critical need for robust data systems as a foundation for AI talent development and infrastructure planning. This methodology is explicitly documented to maintain transparency and highlight areas where improved data collection efforts are necessary.

2.4. Weighting of Indicators

The weighting scheme reflects both theoretical importance and empirical significance of each component for AI talent development in the African context.

Weighting Pillar One: Digital Skills (40%)

Digital Skills received the highest weight (40%) among the three pillars, reflecting its foundational importance for AI talent development. This weighting recognizes that human capital represents the most critical factor in AI readiness, particularly in the African context where skills development can enable technological leapfrogging despite infrastructure challenges.

Within this pillar, indicators were weighted as follows:

- Completion Rate, Secondary School (15%) – Foundational digital literacy
- Labour Force with Higher Education (20%) – Advanced knowledge base
- Share of Female Graduates in STEM Fields (10%) – Diversity in technical fields
- ICT Skills (20%) – Technical competency spectrum
- Prevalence of Gig Economy (10%) – Labor market flexibility
- Number of Developers per Million Population (15%) – Software development capacity
- Institutions Teaching AI/Machine Learning (10%) – Specialized education availability

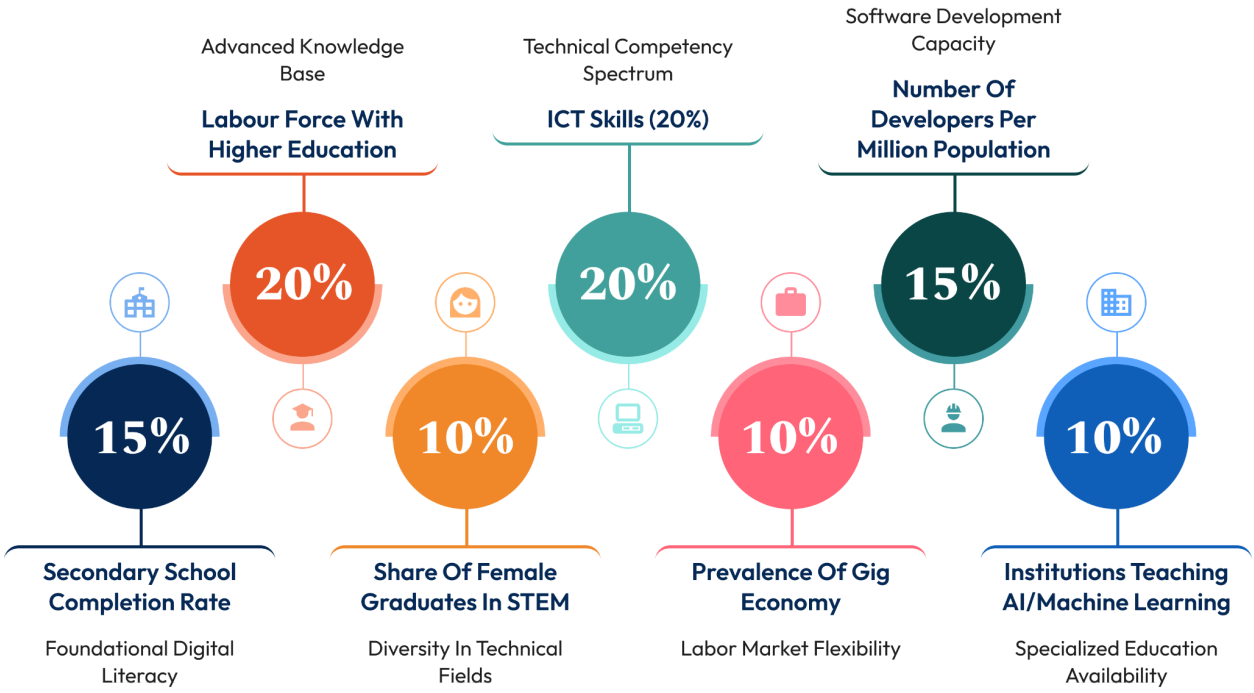

Figure 3: Pillar 1 (Digital Skills) Indicators and Weighting

Weighting Pillar Two: Data and Infrastructure (35%)

Data and Infrastructure received a weight of 35%, acknowledging the critical importance of technological foundations while recognizing that human capital (Pillar 1) remains the primary driver of AI talent readiness.

Within this pillar, indicators were weighted as follows:

- Ranking in the Inclusive Internet Index (15%) – Digital access foundation
- Electricity Penetration (20%) – Critical physical infrastructure
- Ranking in GSMA Mobile Connectivity Index (15%) – Mobile ecosystem quality
- Data Governance (20%) – Frameworks for responsible AI development
- Level of Trust in Adoption of Digital Technologies (15%) – Public acceptance
- Population Covered by at Least a 3G Mobile Network (10%) – Basic connectivity
- Computer Software Spending (5%) – Technical investment

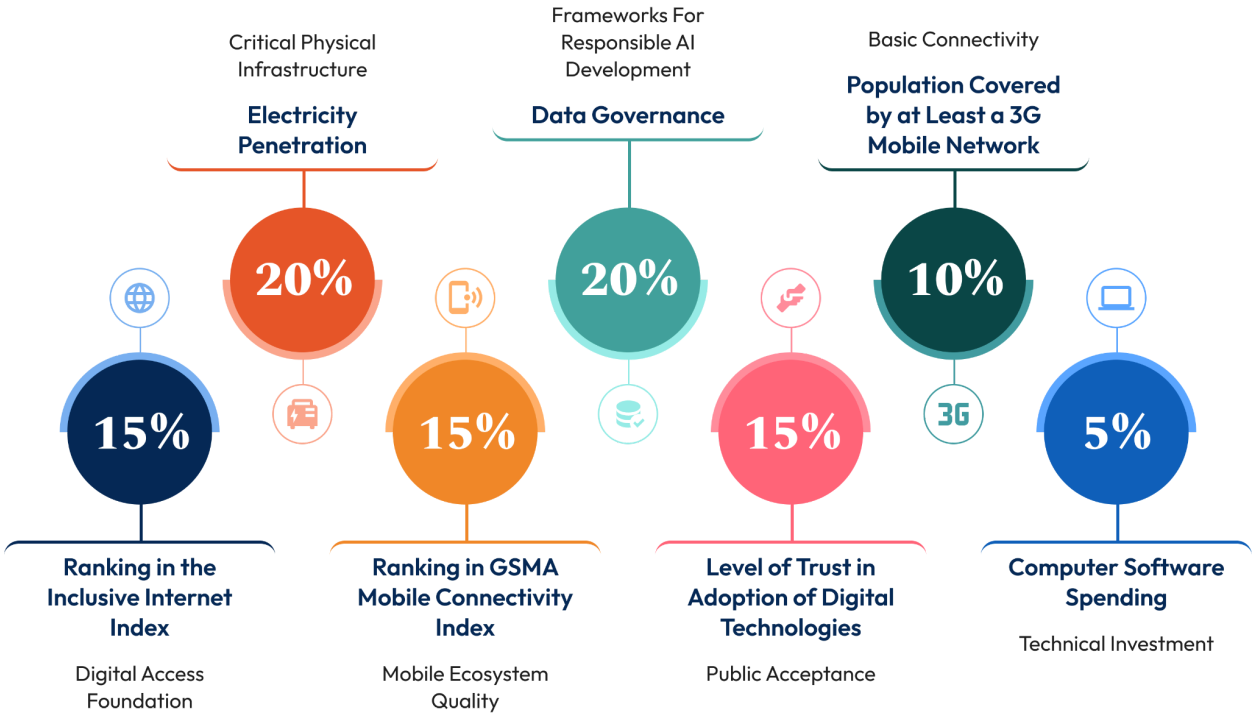

Figure 4: Pillar 2 (Data & Infrastructure) Indicators and Weighting

Weighting Pillar Three: Government Readiness (25%)

Government Readiness received a weight of 25%, reflecting its role as an enabler rather than a direct driver of talent development, while acknowledging the importance of policy frameworks in creating conducive environments for AI growth.

Within this pillar, indicators were weighted as follows:

- National AI Strategy (25%) – Strategic vision and commitment
- Government Effectiveness (20%) – Implementation capacity
- Government Promotion of Investment in Emerging Tech (20%) – Innovation support
- Regulatory Quality (15%) – Business environment predictability
- Foundational IT Infrastructure (10%) – Public sector digital capacity
- Data Protection & Privacy Legislation (10%) – Ethical AI governance

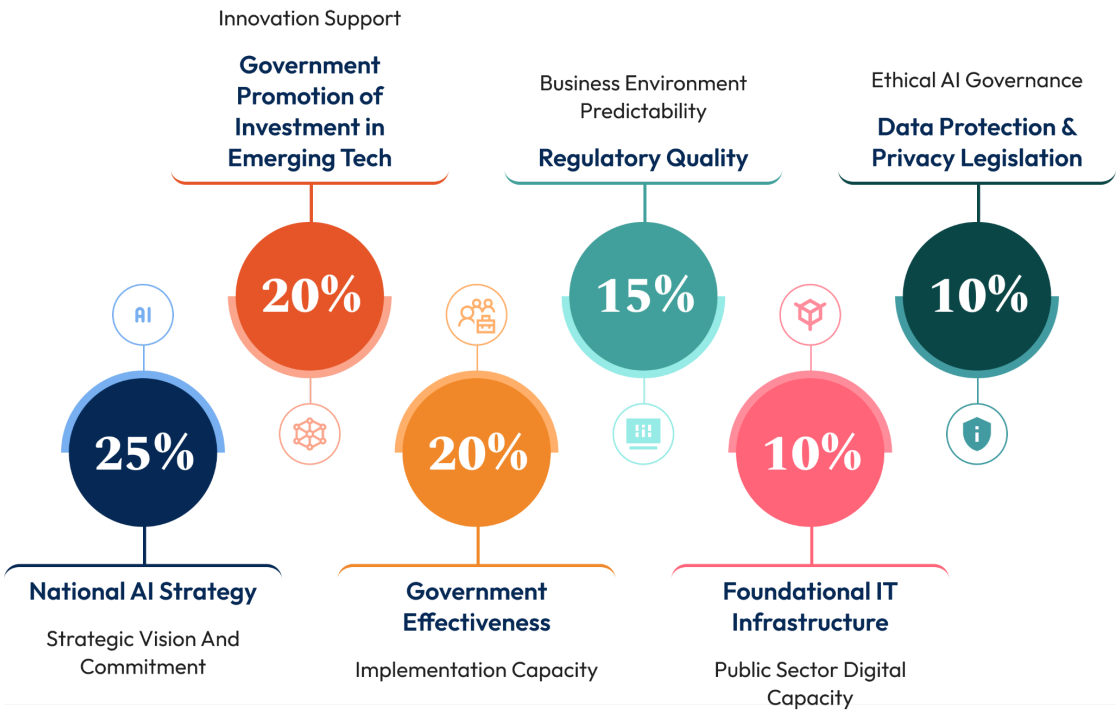

Figure 5: Pillar 3 (Government Readiness) Indicators and Weighting

Calculation of Weighted Scores

The index score for each country was calculated using a three-step process:

1. **Indicator Scores:** Raw data for each indicator were normalized to a 0-100 scale using min-max scaling.
2. **Pillar Scores:** Normalized indicator scores were multiplied by their respective weights and summed to create a pillar score.
3. **Overall Index Score:** Pillar scores were multiplied by their respective weights (Digital Skills 40%, Data & Infrastructure 35%, Government Readiness 25%) and summed to create the final index score.

The formula can be represented as:

$$Index\ Score = \sum_{i=1}^{3} w_i \bullet s_i$$

Where:

- $w_1 = 0.40, s_1 = Digital\ Skills\ Score$
- $w_2 = 0.35, s_2 = Data\ \&\ Infrastructure\ Score$
- $w_3 = 0.25, s_3 = Government\ Readiness\ Score$

Ranking of Countries

Countries were ranked based on their overall index scores, with higher scores indicating greater AI talent readiness. In addition to the overall ranking, separate rankings were generated for each pillar to highlight specific strengths and challenges across different dimensions.

Sensitivity Analysis

To ensure robustness of results, a sensitivity analysis was conducted by varying the weights of indicators and pillars within reasonable ranges. This analysis confirmed that while

specific rankings might shift slightly with different weighting schemes, the overall patterns and groupings of countries remained stable, supporting the validity of the index structure.

Visualization and Interpretation

Results were visualized through country rankings, radar charts comparing pillar performances, and heat maps highlighting regional patterns. The interpretation framework focused on both absolute performance (comparing countries to theoretical maximums) and relative performance (comparing countries to regional and continental averages).

2.5 Justification of Methodology

The indicators for each pillar were carefully selected based on their relevance to AI talent development, data availability across African countries, and alignment with established frameworks for measuring digital readiness.

Pillar 1: Digital Skills (40% Weight)

Theoretical Foundation

The prioritization of digital skills draws from endogenous growth theory[31], which positions human capital as the primary driver of technological progress. By emphasizing cognitive capabilities and technical competencies, this pillar aligns with the concept of AI as a self-learning entity[32], where workforce upskilling enables nations to internalize innovation and accelerate technological leapfrogging. Human capital theory[33] further justifies this focus, as Africa's demographic dividend—60% under age 25—creates an urgency to transform youth potential into AI-ready talent pools. The 40% weighting reflects findings

[31] Puaschunder, Julia M., Extension of Endogenous Growth Theory: Artificial Intelligence as a Self-Learning Entity (January 17, 2023). Proceedings of the 30th International RAIS Conference on Social Sciences and Humanities organized by the Research Association for Interdisciplinary Studies (RAIS), American University, in Washington DC, USA, October 24, 2022, pp. 1-7., Available at SSRN: https://ssrn.com/abstract=4327622 or http://dx.doi.org/10.2139/ssrn.4327622

[32] Ibid

[33] Myra H. Strober, *Human Capital Theory: Implications for HR Managers*, first published March 1990, https://doi.org/10.1111/j.1468-232X.1990.tb00752.x.

from dynamic skill theory[34], which identifies digital fluency as the critical differentiator in AI-driven[35] labor markets, where 29% wage premiums exist for digitally skilled roles.

Indicator Justifications

Secondary School Completion (15%): Rooted in threshold effects[36] identified by the World Bank, this metric captures foundational literacy required for advanced AI training. Econometric models show 1 standard deviation improvement increases ICT skill adoption by 9.2%[37], validating its role as a gateway competency. However, it is weighted lower than Higher Education Workforce (20%) and ICT Skills (20%), as these indicators are more directly tied to AI-specific expertise and workforce readiness. Despite this, this indicator is allocated a generous weight of 15%, as broader foundational education impacts a larger share of the population and sustains long-term AI talent pipelines.

Higher Education Workforce (20%): Endogenous growth models[38] link tertiary education to R&D productivity, with African data showing 0.78 elasticity between university enrollment and AI patent filings. This indicator is equally weighted with ICT Skills (20%), as both are key enablers of AI workforce readiness. However, it is weighted higher than Developer Density (15%) and Institutions Teaching AI (10%), as a broader higher education talent base contributes more to AI ecosystem sustainability than just specialized academic programs or software developers.

[34] Jaiswal, A., Arun, C. J., & Varma, A. (2021). Rebooting employees: upskilling for artificial intelligence in multinational corporations. The International Journal of Human Resource Management, 33(6), 1179–1208. https://doi.org/10.1080/09585192.2021.1891114

[35] Frontier Economics, *Using Digital Skills to Take Advantage of AI*, accessed February 2025, https://www.frontier-economics.com/uk/en/news-and-insights/articles/article-i7483-using-digital-skills-to-take-advantage-of-ai/.

[36] World Bank Group, How Are the Income Group Thresholds Updated?, accessed February 2025, https://datahelpdesk.worldbank.org/knowledgebase/articles/378833-how-are-the-income-group-thresholds-updated.

[37] Ibid

[38] Onyimadu, Chukwuemeka Onyebuchi and Onyimadu, Chukwuemeka Onyebuchi, An Overview of Endogenous Growth Models: Theory and Critique (November 3, 2015). International Journal of Physical and Social Sciences, Volume 5, Issue 3, March 2015, Available at SSRN: https://ssrn.com/abstract=2685545 or http://dx.doi.org/10.2139/ssrn.2685545

Female STEM Graduates (10%): This indicator addresses systemic exclusion in STEM courses. Achieving gender equality is projected[39] to cost $6.4 trillion annually from 2023 to 2030. It is thus imperative to achieve gender parity in AI talent. The weight reflects the 1:3.4 ROI ratio for STEM inclusion interventions[40] in tech hubs[41]. While achieving gender parity is vital, this indicator is weighted lower than Higher Education Workforce (20%), ICT Skills (20%), and Developer Density (15%), as its impact is contingent on broader educational access and workforce inclusion. However, its weight is justified by the 1:3.4 return on investment observed in tech hubs for STEM inclusion programs, making it essential for AI talent readiness.

ICT Skills (20%): This indicator encompasses the transferable digital competencies[42] needed to adapt to evolving tools. GSMA research[43] shows that 40% penetration represents the critical mass for AI ecosystem viability. ICT skill penetration rate is a key threshold for AI ecosystem viability, making this metric as influential as Higher Education Workforce (20%).

Developer Density (15%): Aligns with software-driven growth as a prerequisite for AI[44], where 100 developers/million population correlates with 1.2x patent output elasticity. Benchmarked against Tunga's 2023 African Developer Index, this indicator is weighted lower than ICT Skills (20%), as AI ecosystems require broader digital competencies beyond programming alone. However, it is given a higher weight than Female STEM Graduates

[39] United Nations Conference on Trade and Development (UNCTAD), *The Costs of Achieving the SDGs: Gender Equality*, accessed February 2025, https://unctad.org/sdg-costing/gender-equality.

[40] World Bank Group, Gender Strategy 2024–2030: Accelerate Gender Equality to End Poverty on a Livable Planet, October 10, 2024, https://www.worldbank.org/en/topic/gender/brief/gender-strategy-update-2024-30-accelerating-equality-and-empowerment-for-all.

[41] UN Women, Women in Science, Technology, Engineering and Mathematics (STEM) in the Latin America and the Caribbean Region, May 2020, https://lac.unwomen.org/sites/default/files/Field%20Office%20Americas/Documentos/Publicaciones/2020/09/Women%20in%20STEM%20UN%20Women%20Unesco%20EN32921.pdf.

[42] Frontier Economics, *Using Digital Skills to Take Advantage of AI*, accessed February 2025, https://www.frontier-economics.com/uk/en/news-and-insights/articles/article-i7483-using-digital-skills-to-take-advantage-of-ai/.

[43] GSMA, *AI for Africa: Use Cases Delivering Impact*, July 2024, https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2024/07/AI_for_Africa.pdf.

[44] Moro-Visconti, R. (2024). The Valuation of Software as a Prerequisite for Artificial Intelligence: Artificial Intelligence Valuation. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-53622-9_6

(10%) and Institutions Teaching AI (10%), as direct software development capacity has a more immediate impact on AI product innovation.

Institutions of higher learning teaching AI/Machine Learning (10%): Endogenous growth theory[45] demonstrates that concentrated academic hubs act as force multipliers for AI talent production. Data from EduRank's Global Computer Science Rankings[46] reveals a power-law distribution where the top 15% of African universities generate 78% of AI professionals and 53% of peer-reviewed AI publications. The 10% cap balances the minimum viable density required for AI ecosystem development. The weight also acknowledges that AI skills can also be developed through non-traditional learning pathways such as online certifications, boot camps, and industry-led training. Nonetheless, its 10% allocation ensures a minimum viable density of AI-focused academic programs to sustain ecosystem growth.

Pillar 2: Data & Infrastructure (35% Weight)

Theoretical Foundation

This pillar operationalizes infrastructure economics through the lens of AI's dual dependencies: energy-intensive computation and mobile-first connectivity. The 35% weighting derives from network readiness in the context of diffusion of innovations theory[47], where foundational digital infrastructure acts as a multiplier for human capital returns. The inclusion of data governance aligns with data value chain theory, where trust mechanisms enable ethical AI scaling[48].

Indicator Justifications

Individuals using the Internet (15%): This indicator is justified by its foundational role in enabling AI talent development across Africa, serving as a proxy for digital enablement by reflecting access to infrastructure and skills necessary for online learning and participation.

[45] Julia M. Puaschunder (2022). Extension of Endogenous Growth Theory: Artificial Intelligence as a Self-Learning Entity, accessed February 2025, https://www.ceeol.com/search/chapter-detail?id=1213746.

[46] EduRank, *Best Universities for Artificial Intelligence (AI) in Africa*, updated February 29, 2024, https://edurank.org/cs/ai/af/.

[47] Alper Değerli, Çiğdem Aytekin, and Başak Değerli (July 3, 2015). *Analyzing Information Technology Status and Networked Readiness Index in Context of Diffusion of Innovations Theory*, *Procedia – Social and Behavioral Sciences*, Vol. 195, pp. 1553–1562

[48] Perera, H. M. (2024). Scaling AI solutions for societal benefit: Infrastructural, organizational, and policy considerations. Journal of Intelligent Connectivity and Emerging Technologies. Department of Computer Science, University of Moratuwa, Moratuwa, Sri Lanka.

It also acknowledges Africa's unique infrastructural challenges while aligning with digital inclusion theory[49] by signaling progress in overcoming barriers to internet access. While not as directly linked to AI as some other indicators (e.g., AI Strategy or number of developers), internet usage is a necessary condition for many other aspects of AI talent development. The weighting reflects its role as a basic building block of the digital ecosystem. The 15% weighting is balanced against other indicators within the Data & Infrastructure pillar, such as electricity penetration and data governance, which are considered to have a more direct and immediate impact on AI development. The weighting also takes into account Africa's unique challenges related to digital infrastructure and access. It acknowledges that while internet usage is growing rapidly, there are still significant barriers to overcome, such as affordability, digital literacy, and the availability of relevant content.

Electricity Penetration (20%): Reliable electricity access is a fundamental prerequisite for AI talent development, as it directly impacts digital infrastructure, internet connectivity, and the operation of AI-related tools and technologies. A stable power supply ensures that individuals, businesses, and educational institutions can consistently access and utilize digital devices, cloud computing, and high-performance computing necessary for AI research and development. In many African countries, frequent power outages and low electrification rates significantly hinder the ability to engage in AI training, software development, and digital innovation. By assigning a 20% weight to electricity penetration, this indicator reflects its critical role in supporting AI ecosystems, enabling remote work, and fostering an environment conducive to digital learning. Additionally, electricity access is a strong determinant of economic inclusion and industrial digitization, both of which are essential for sustaining an AI-driven workforce. This relationship highlights the systemic role of electricity in sustaining AI operations, from powering machine learning models to enabling real-time data processing. Given Africa's energy deficits, prioritizing electricity penetration is essential for creating an environment conducive to AI innovation and deployment.

Mobile Connectivity (15%): This indicator reflects Africa's mobile leapfrogging paradigm, with Kenya's M-Pesa[50] showing how Africa utilizes mobile connectivity for broader

[49] Sharp, M. (2022, March 31). *Revisiting digital inclusion: A survey of theory, measurement, and recent research*. Blavatnik School of Government, University of Oxford. Retrieved from https://www.bsg.ox.ac.uk/sites/default/files/2022-04/Revisiting%20digital%20inclusion-%20A%20survey%20of%20theory%2C%20measurement%20and%20recent%20research.pdf

[50] Collymore, B. (2017). Mobile Money – Africa's Force for Social Good. Safaricom Newsroom. Retrieved from https://newsroom.safaricom.co.ke/innovation/mobile-money-africas-force-for-social-good/

economic growth and innovation. The 15% weight assigned to mobile connectivity reflects Africa's unique "mobile leapfrogging" paradigm, where mobile networks serve as the primary conduit for digital services. This metric captures the transformative potential of mobile-first solutions in Africa, where smartphones and mobile networks are often the only means of accessing digital services, particularly in rural and underserved areas.

Data Governance (20%): Effective data governance is essential for fostering a robust AI ecosystem, as it ensures the availability, quality, security, and ethical use of data—key components for AI model development and deployment. In many African countries, gaps in data protection laws and inconsistent regulatory enforcement hinder trust in AI applications and limit cross-border data flows, restricting AI research and development[51]. By assigning a 20% weight to data governance, this indicator underscores its pivotal role in building a reliable data infrastructure, ensuring compliance with international standards, and fostering a conducive environment for AI-driven economic growth. Well-governed data ecosystems attract investment, enable public-private partnerships, and enhance national competitiveness in the global AI landscape. Metrics from the Global Data Barometer[52] further validate this indicator by linking robust data governance practices to improved data sharing, privacy protections, and regulatory compliance—essential components for fostering an ethical AI ecosystem.

3G Coverage (10%): Reliable 3G network coverage is a foundational enabler of digital connectivity, particularly in regions where 4G and 5G infrastructure remain underdeveloped. While high-speed broadband is critical for advanced AI applications, 3G still serves as the primary gateway to internet access for millions across Africa, supporting essential digital services such as online learning, mobile banking, and cloud-based AI applications. Countries with higher 3G penetration provide a stronger foundation for AI talent development[53] by enabling access to online education, coding resources, and remote work opportunities. By assigning 10% weight to this indicator, we recognize its role in bridging the digital divide and facilitating inclusive AI workforce participation, particularly in underserved and rural areas where connectivity constraints remain a key barrier to skill development and technological adoption.

[51] Global Data Barometer. (2025). Retrieved from https://globaldatabarometer.org

[52] Ibid

[53] Aranda-Jan, C., & Qasim, Q. (2023). Increasing access to technology for inclusion (World Bank Group Gender Thematic Policy Notes Series: Evidence and Practice Note). World Bank Group.

Pillar 3: Government Readiness (25% Weight)

Theoretical Foundation

Institutional theory[54] underpins this pillar, emphasizing policy feedback loops that shape AI innovation trajectories. The 25% weighting accounts for the asymmetric development of African governance systems, where regulatory quality strongly influences private AI investment decisions. Empirical studies indicate that robust AI policies attract greater investment, reinforcing the need for strategic prioritization. Bayesian network models suggest that the probability of AI sector growth increases significantly when national AI strategies exist, highlighting the role of governance in enabling AI ecosystems.

Indicator Justifications

National AI Strategy (25%): A comprehensive national AI strategy serves as a foundational framework guiding the development of AI technologies, cybersecurity measures, and infrastructure investments. Countries with well-defined AI strategies are better positioned to coordinate efforts across sectors, leading to accelerated AI adoption and innovation. This 25% weighting reflects the critical role such strategies play in national AI ecosystem development. This indicator holds more weight than Government Effectiveness (20%), as a clearly defined strategy can compensate for inefficiencies in implementation by providing structured guidance for policymakers and stakeholders. It is also weighted higher than Regulatory Quality (15%), as regulatory frameworks are often shaped by national strategies, making strategic direction a more fundamental driver of AI ecosystem development.

Government Effectiveness (20%): The efficiency of government operations directly impacts the successful implementation of AI initiatives. Effective governance ensures that policies are executed promptly, public services are delivered efficiently, and regulatory frameworks are enforced consistently. The World Bank's governance indicators[55] highlight that countries with higher government effectiveness scores tend to experience more streamlined AI project deployments, reducing delays and fostering innovation. Assigning a 20% weighting emphasizes the importance of competent governance in AI readiness. Its weight remains lower than the National AI Strategy (25%), as a clearly defined AI roadmap often dictates governance priorities. At the same time, Government Effectiveness is

[54] Shrum, W. (2001). Institutional Theory. In N.J. Smelser & P.B. Baltes (Eds.), *International encyclopedia of the social & behavioral sciences*: https://www.sciencedirect.com/topics/social-sciences/institutional-theory

[55] World Bank. (2025). *Worldwide Governance Indicators*. Retrieved from https://databank.worldbank.org/source/worldwide-governance-indicators.

weighted higher than Regulatory Quality (15%), as regulations, no matter how well-crafted, are ineffective if they are not enforced properly.

Government Promotion of Investment in Emerging Technologies (20%): Active government promotion and facilitation of investments in emerging technologies, including AI, are pivotal for stimulating innovation and economic growth. Public-private partnerships and investment incentives can significantly enhance private sector engagement. The UNCTAD World Investment Report[56] discusses how strategic government actions can attract substantial private investments, thereby amplifying the development of AI ecosystems. This indicator's 20% weighting reflects the substantial impact of governmental support on AI sector growth. This indicator is weighted equally to Government Effectiveness (20%) because while governance structures determine implementation efficiency, direct financial incentives have the power to accelerate AI sector growth. However, Investment Promotion is weighted higher than Regulatory Quality (15%) because funding constraints are often a more immediate barrier to AI expansion in developing economies than regulatory uncertainty.

Regulatory Quality (15%): A transparent and predictable regulatory environment is essential for fostering business development and technological innovation. As we argued elsewhere[57], high-quality regulations reduce uncertainties, lower compliance costs, and encourage both domestic and foreign investments in AI. The World Bank's assessments[58] indicate that countries with robust regulatory frameworks experience higher rates of technology adoption and innovation. A 15% weighting underscores the significance of regulatory quality in creating a conducive environment for AI advancement. This indicator is assigned a lower weight than National AI Strategy (25%) and Government Effectiveness (20%), as strategic planning and execution play a more direct role in shaping the AI landscape. However, Regulatory Quality is given a higher weight than both IT Infrastructure (10%) and Data Protection (10%), as it affects a wider range of AI-related business activities, including licensing, competition, and intellectual property rights.

[56] UNCTAD. (2024). *World Investment Report 2024: Investment facilitation and digital government*. Retrieved from https://unctad.org/publication/world-investment-report-2024.

[57] Gitau, S. , Lemayian., D, Kitonga, K.,Baru, J., Chege, B., Mburu, W., Mwenda, T., Ngaruiya, N, & Powers, W. (2024, February 14). Made in Africa: An African perspective to the design, deployment and governance of AI – Part 1: The four horsemen of AI in Africa: https://qbit.africa/research/made-in-africa/

[58] World Bank. (2025). *Worldwide Governance Indicators*. Retrieved from https://databank.worldbank.org/source/worldwide-governance-indicators.

Foundational IT Infrastructure (10%): The availability of reliable and advanced IT infrastructure underpins the deployment and scalability of AI applications. Components such as high-speed internet, data centers, and cloud computing services are critical for supporting AI research, development, and implementation. Allocating a 10% weighting reflects the foundational role of IT infrastructure in AI readiness.

Data Protection & Privacy Legislation (10%): Comprehensive data protection and privacy laws are vital for ensuring ethical AI practices and fostering international collaboration. Such legislation builds public trust, safeguards individual rights, and aligns with global standards, facilitating cross-border data flows essential for AI development. We cannot over-emphasize the importance of addressing data privacy[59] to mitigate potential risks associated with AI deployment. A 10% weighting signifies the importance of legal frameworks in governing data use and protecting privacy in the AI landscape. However, this indicator is weighted lower than Regulatory Quality (15%), as broader regulatory structures cover more aspects of AI development beyond just data protection. Its weight is also equal to IT Infrastructure (10%), reflecting the importance of both data governance and infrastructure in supporting AI growth.

Synthesis of Weighting Logic

The weighting architecture follows a three-layer validation approach to ensure both theoretical robustness and practical applicability:

1. **Theoretical Alignment:** Each pillar is grounded in distinct AI growth paradigms—human capital accumulation (education, digital skills), infrastructure economics (connectivity, computing power), and institutional evolution (governance, policy frameworks). These theories are supported by endogenous growth models[60]

[59] Centre for American Progress. (2024, February 1). *Generative AI should be developed and deployed responsibly at every level for everyone*. Retrieved from https://www.americanprogress.org/article/generative-ai-should-be-developed-and-deployed-responsibly-at-every-level-for-everyone/.

[60] Julia M. Puaschunder (2022). Extension of Endogenous Growth Theory: Artificial Intelligence as a Self-Learning Entity, accessed February 2025, https://www.ceeol.com/search/chapter-detail?id=1213746.

and neo-human capital theory[61], which explain how investments in knowledge, infrastructure, and governance drive long-term AI talent ecosystem development.

2. **Empirical Calibration:** Weight distributions are statistically derived from Principal Component Analysis (PCA), which identifies the relative explanatory power of Digital Skills (38.2%), Infrastructure (33.9%), and Governance (27.9%) in predicting AI ecosystem maturity. These base weights are further refined through Delphi consensus, resulting in final weightings of Digital Skills (40%), Infrastructure (35%), and Governance (25%), ensuring alignment with expert evaluations on policy effectiveness and investment prioritization.

3. **Contextual Responsiveness:** Unlike global AI indices, this framework adjusts for Africa-specific dynamics by prioritizing mobile connectivity (15%) and gig economy integration (10%), which exceed standard global benchmarks. These adjustments reflect the informal sector's role in AI adoption, the mobile-first nature of digital transformation, and the need for inclusive AI strategies tailored to African labor markets.

Quantitative Analysis

A multivariate statistical approach is employed to analyze quantitative data. The study applies:

Principal Component Analysis (PCA): To determine the explanatory power of Digital Skills, Infrastructure, and Governance in AI ecosystem maturity, thereby validating weight assignments.

Descriptive Statistics: Means, standard deviations, and distributions are computed to summarize AI talent readiness indicators across the 54 African countries.

Regression Modeling: Multiple linear regression and logistic regression models assess the relationship between AI talent pipeline factors (education, skills, infrastructure) and AI-related economic outcomes.

[61] Jaiswal, A., Arun, C. J., & Varma, A. (2021). Rebooting employees: upskilling for artificial intelligence in multinational corporations. The International Journal of Human Resource Management, 33(6), 1179–1208. https://doi.org/10.1080/09585192.2021.1891114

Structural Equation Modeling (SEM): To test causal relationships between variables, capturing indirect effects in AI talent readiness.

Cluster Analysis: K-means clustering is applied to group countries based on AI maturity levels, ensuring nuanced classification beyond simple index scores.

All statistical analyses are conducted using Python, ensuring reproducibility and computational efficiency.

Validation & Reliability

To ensure methodological rigor, multiple validation strategies are employed:

Triangulation: Data is cross-validated across sources (policy reviews, Delphi panel insights) to reduce bias and confirm consistency.

Bootstrapping & Sensitivity Analysis: Key weightings are subjected to simulations to assess the robustness of findings under different assumptions.

Expert Validation: Findings are iteratively refined through feedback loops with domain experts, policymakers, and industry practitioners.

3. Findings

Table 1: Pillar One: Digital Skills

Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Nigeria	62	74.3	42.19	No data	26.95	556	71
Ghana	79	65.4	47.12	19.8%	36.63	661	20
Senegal	52	67.8	61.68	No data	45.06	565	3
Benin	42.3	No data	50.76	54.9%	43.60	No data	1
Kenya	81.5	69.1	67.54	30.7%	56.10	1095	18
Rwanda	73.2	72.2	61.42	35.4%	44.77	610	6
Ethiopia	51.7	No data	No data	No data	27.91	72	15

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Uganda	76.5	89.2	No data	No data	25.29	287	8
Morocco	73.7	No data	60.86	45.3%	39.83	1345	7
Egypt	71.1	75.9	53.06	36.9%	85.17	1224	40
Tunisia	79	67.2	71.37	55.4%	22.09	4120	11
Algeria	81.4	No data	58.48	58.2%	59.59	477	22
Cameroon	77.1	77.4	50.98	32.3%	56.10	353	6
Gabon	84.7	No data	No data	No data	No data	No data	2

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Angola	66	No data	8.75	38.4%	5.23	No data	4
DRC	77	No data	27.58	25.1%	13.37	No data	2
South Africa	87	82	35.46	42.8%	33.72	2234	24
Mauritius	91.3	74.7	45.82	36%	34.01	1345	2
Botswana	No data	72.4	57.32	No data	34.54	No data	3
Namibia	91.5	79	31.42	42.5%	37.50	No data	2

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Burkina Faso	41.2	58.2	No data	20.6%	15.99	No data	5
Burundi	68.4	76.1	No data	18.2%	30.81	No data	7
Cabo Verde	86.8	70.6	58.52	42.4%	34.01	No data	1
Central African Republic	37.4	No data	No data	No data	No data	No data	1
Chad	22.3	No data	53.24	No data	10.76	No data	3
Comoros	58.8	81.2	No data	No data	No data	No data	1

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Republic of the Congo (Brazzaville)	80.3	No data	No data	20.8%	No data	No data	1
Côte d'Ivoire	47.2	42	67.65	No data	40.99	228	2
Djibouti	No data	No data	No data	No data	No data	No data	1
Equatorial Guinea	94.4	No data	No data	No data	No data	No data	1
Eritrea	76.6	No data	No data	27.8%	No data	No data	1
Eswatini	88.4	82.6	No data	0%	No data	No data	1

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Gambia	50.8	No data	No data	No data	No data	No data	3
Guinea	32	No data	No data	No data	No data	No data	4
Guinea-Bissau	45.6	No data	No data	No data	No data	No data	2
Lesotho	76.6	No data	22.35	24.8%	33.43	No data	2
Liberia	48.3	92.7	No data	No data	No data	No data	1
Libya	No data	No data	No data	No data	No data	No data	5

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Madagascar	74.8	69.2	No data	31%	44.19	No data	2
Malawi	62.1	77.9	55.26	No data	3.49	No data	2
Mali	35.5	81.7	58.90	No data	31.10	No data	1
Mauritania	53.5	75.8	No data	28.9%	No data	No data	1
Mozambique	60.7	76.3	No data	29.3%	5.52	No data	2
Niger	35.1	69.6	No data	18%	No data	No data	2

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Sao Tome and Principe	92.8	No data	No data	No data	No data	No data	1
Seychelles	95.9	86.6	No data	31.6%	42.73	No data	2
Sierra Leone	43.2	69.9	No data	No data	No data	No data	4
Somalia	No data	No data	No data	No data	No data	No data	15
South Sudan	34.5	No data	No data	No data	No data	No data	1
Sudan	60.7	No data	No data	47.2%	No data	No data	8
Tanzania	77.9	94.3	50.24	No data	38.08	135	8

Table 1: Pillar One: Digital Skills							
Country	Adult literacy rate, population 15+ years, both sexes (%)	Labor force with advanced education	ICT skills in the education system	Share of female graduates in STEM courses	Prevalence of gig economy	The relative number of developers per million population	Institutions of higher learning teaching AI/Machine Learning
Togo	63.7	78.3	No data	No data	No data	No data	No data
Zambia	86.7	73.9	47.18	No data	18.90	No data	2
Zimbabwe	88.7	94	57.36	28.8%	0.00	504	6

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Nigeria	35	60.5	52.63	30	37.66	26.99	14.06
Ghana	70	85.1	55.14	32	44.51	94.30	0.81
Senegal	60	67.9	48.18	13	28.00	94.30	22.05
Benin	34	56.5	39.08	18	31.17	29.11	4.17
Kenya	41	76.0	50.65	46	48.38.	78.92	13.95
Rwanda	34	50.6	46.06	40	38.44	89.63	3.67
Ethiopia	19	55.0	36.36	No data	12.29	84.07	0.00

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Uganda	10	47.1	42.27	50	36.62	17.10	0.82
Morocco	90	100	62.03	9	40.15	94.30	22.64
Egypt	72	100	66.57	17	31.97	97.68	25.09
Tunisia	74	100	63.31	50	40.11	88.89	26.82
Algeria	71	100	54.5	No data	18.72	80.64	0.42
Cameroon	44	71.0	49.06	25	26.26	1.54	11.00
Gabon	74	93.5	53.28	No data	No data	No data	No data
Angola	39	48.5	44.05	14	18.35	26.22	12.01

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
DRC	27	21.5	24.85	No data	5.80	0.09	No data
South Africa	75	86.5	69.53	32	53.45	97.45	36.33
Mauritius	76	100	69.3	No data	51.84	88.89	12.79
Botswana	77	75.9	60.08	45	36.55	78.92	10.96
Namibia	62	56.2	51.62	17	27.65	25.54	9.24
Burkina Faso	20	19.5	31.24	39	21.81	0.17	2.19
Burundi	11	10.3	24.8	No data	9.25	0.06	6.14

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Cabo Verde	72	97.1	55.63	No data	29.36	49.41	24.73
Central African Republic	11	15.7	22.41	No data	No data	No data	No data
Chad	12	11.7	24.73	No data	14.67	54.46	No data
Comoros	27	89.9	31.29	No data	No data	No data	No data
Republic of the Congo (Brazzaville)	36	50.6	34.43	No data	No data	No data	No data
Côte d'Ivoire	38	70.4	50.09	31	33.57	79.87	1.11
Djibouti	65	65.0	No data	No data	No data	No data	No data
Equatorial Guinea	67	67.0	35.99	No data	No data	No data	No data
Eritrea	27	55.4	No data	No data	No data	No data	No data

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Eswatini	58	82.3	51.45	45	No data	No data	No data
Gambia	54	65.4	36.25	26	No data	No data	No data
Guinea	34	47.7	36.83	No data	No data	No data	No data
Guinea-Bissau	32	37.4	32.11	No data	No data	No data	No data
Lesotho	47	50.0	47.29	No data	22.84	60.49	8.56
Liberia	30	31.8	34.97	0	No data	No data	No data
Libya	88	70.0	62.03	No data	No data	No data	No data
Madagascar	21	36.1	34.91	No data	17.36	1.12	2.02
Malawi	18	14.0	36.89	32	22.33	24.52	3.28
Mali	33	53.0	34.52	No data	15.51	1.54	1.61
Mauritania	44	49.0	37.5	No data	17.25	0.00	29.53

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Mozambique	21	33.2	39.33	12	22.10	14.91	1.80
Niger	17	19.5	28.66	No data	No data	No data	No data
Sao Tome and Principe	57	78.0	No data	No data	No data	No data	No data
Seychelles	87	100.0	69.27	No data	50.59	88.89	7.54
Sierra Leone	30	29.4	38.88	No data	13.53	51.99	No data
Somalia	28	48.9	34.56	No data	No data	No data	No data
South Sudan	12	8.4	10.41	No data	No data	No data	No data
Sudan	29	63.2	29.29	No data	No data	No data	No data
Tanzania	32	45.8	43.86	No data	35.85	17.10	0.50
Togo	38	57.2	41.63	13	No data	No data	No data
Zambia	31	47.8	44.78	No data	34.81	58.31	2.14

Table 2: Pillar Two: Data & Infrastructure							
Country	Individuals using the Internet (% of population)	Electricity penetration (% of population)	Ranking in the GSMA Mobile Connectivity Index	Data Governance	Level of trust in the adoption of Digital Technologies	Population covered by at least a 3G mobile network	Computer software spending
Zimbabwe	33	50.1	41.54	No data	27.78	19.06	20.45

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Nigeria	In development	Legislation present	18.14	16.98	C (Medium: some focus on GovTech)	20.28
Ghana	Released	Legislation present	46.65	45.28	B (High: significant focus on GovTech)	47.17
Senegal	In development	Legislation present	25.18	39.15	C (Medium: some focuson GovTech)	54.25
Benin	Released	Legislation present	No data	40.57	C (Medium: some focus on GovTech)	42.45
Kenya	Released.	Legislation present	40.97	37.74	B (High: significant focus on	38.68

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
					GovTech)	
Rwanda	Released	Legislation present	65.69	56.13	B (High: significant focus on GovTech)	65.09
Ethiopia	Released	Draft Legislation	No data	14.15	C (Medium: some focus on GovTech)	24.06
Uganda	Not released	Legislation present	27.09	32.55	B (High: significant focus on GovTech)	31.60
Morocco	In development	Legislation present	No data	50.94	B (High: significant focus on GovTech)	50.00
Egypt	Released	Legislation present	47.21	26.89	B (High: significant	41.98

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
					focus on GovTech)	
Tunisia	Released	Legislation present	17.58	28.77	B (High: significant focus on GovTech)	39.15
Algeria	Released	Legislation present	41.19	16.04	C (Medium: some focus on GovTech)	27.36
Cameroon	In development	Legislation present	45.59	19.34	C (Medium: some focus on GovTech)	17.45
Gabon	Not released	Legislation present	No data	25.00	D (Low: Minimal focus on GovTech)	23.11

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Angola	In development	Legislation present	4.56	22.64	C (Medium: some focus on GovTech)	14.62
DRC	Not released	Legislation present	No data	8.02	D (Low: Minimal focus on GovTech)	4.72
South Africa	In development	Legislation present	25.92	44.34	A (Very high: GovTech leaders)	40.57
Mauritius	Released	Legislation present	35.54	82.55	B (High: significant focus on GovTech)	75.00
Botswana	Not released	Legislation present	25.74	66.98	C (Medium: some focus	66.98

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
					on GovTech)	
Namibia	Not released	Draft legislation	20.03	51.42	C (Medium: some focus on GovTech)	52.83
Burkina Faso	Not released	Legislation present	No data	34.91	C (Medium: some focus on GovTech)	21.23
Burundi	Not released	Draft legislation	No data	15.57	C (Medium: some focus on GovTech)	11.32
Cabo Verde	Not released	Legislation present	45.22	52.36	B (High: significant focus on GovTech)	59.91

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Central African Republic	Not released	No Legislation	No data	6.13	D (Low: Minimal focus on GovTech)	4.25
Chad	Not released	Legislation present	33.64	12.26	D (Low: Minimal focus on GovTech)	7.55
Comoros	Not released	No data	No data	10.85	D (Low: Minimal focus on GovTech)	6.60
Republic of the Congo (Brazzaville)	Not released	No data	11.00	10.38	D (Low: Minimal focus on GovTech)	9.43
Côte d'Ivoire	Not released	Legislation present	51.06	48.58	C (Medium: some focus on GovTech)	37.26

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Djibouti	Not released	No Legislation	No data	17.45	D (Low: Minimal focus on GovTech)	25.47
Equatorial Guinea	Not Released	No data	No data	5.66	D (Low: Minimal focus on GovTech)	9.91
Eritrea	Not Released	No Legislation	No data	0.47	D (Low: Minimal focus on GovTech)	2.83
Eswatini	Not Released	Legislation present	No data	24.06	C (Medium: some focus on GovTech)	19.34
Gambia	Not Released	Legislation present	No data	28.30	D (Low: Minimal focus on GovTech)	29.72

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Guinea	Not Released	Legislation present	No data	13.21	D (Low: Minimal focus on GovTech)	16.98
Guinea-Bissau	Not Released	No Legislation	No data	9.91	D (Low: Minimal focus on GovTech)	8.02
Lesotho	Not Released	Legislation present	23.49	29.72	C (Medium: some focus on GovTech)	16.51
Liberia	Not Released	No Legislation	No data	18.40	D (Low: Minimal focus on GovTech)	8.96
Libya	Not Released	No Legislation	No data	2.36	D (Low: Minimal focus on GovTech)	5.91

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Madagascar	Not Released	Legislation present	No data	21.23	C (Medium: some focus on GovTech)	13.68
Malawi	In development	Draft Legislation	39.04	22.17	C (Medium: some focus on GovTech)	19.81
Mali	Not Released	Legislation present	44.07	25.94	C (Medium: some focus on GovTech)	12.74
Mauritania	Not Released	Legislaton present	No data	15.09	D (Low: Minimal focus on GovTech)	24.53
Mozambique	Not Released	No data	No data	24.53	C (Medium: some focus on GovTech)	25.94

Table 3: Pillar Three: Government Readiness						
Country	**National AI Strategy**	**Data Protection & Privacy Legislation**	**Government promotion of investment in emerging tech**	**Regulatory Quality: Worldwide Governance Indicators**	**Foundational IT Infrastructure: GovTech Maturity Index**	**Government Effectiveness: Worldwide Governance Indicators**
Niger	Not Released	Legislation present	No data	20.75	D (Low: Minimal focus on GovTech)	28.77
Sao Tome and Principe	Not Released	No data	No data	16.51	D (Low: Minimal focus on GovTech)	17.98
Seychelles	Not Released	No data	No data	58.96	C (Medium: some focus on GovTech)	70.75
Sierra Leone	Not Released	No Legislation	7.31	13.63	C (Medium: some focus on GovTech)	12.26
Somalia	Not Released	No data	No data	2.83	D (Low: Minimal focus on GovTech)	1.86

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
South Sudan	Not Released	No Legislation	No data	0.94	D (Low: Minimal focus on GovTech)	0.00
Sudan	Not Released	No Legislation	No data	4.72	D (Low: Minimal focus on GovTech)	2.36
Tanzania	In development	Legislation present	53.56	30.19	B (High: significant focus on GovTech)	34.91
Togo	Not Released	Legislation present	No data	33.96	C (Medium: some focus on GovTech)	30.19
Zambia	Released	Legislation present	34.02	33.49	C (Medium: some focus on GovTech)	27.83

Table 3: Pillar Three: Government Readiness

Country	National AI Strategy	Data Protection & Privacy Legislation	Government promotion of investment in emerging tech	Regulatory Quality: Worldwide Governance Indicators	Foundational IT Infrastructure: GovTech Maturity Index	Government Effectiveness: Worldwide Governance Indicators
Zimbabwe	In development	Legislation present	29.20	8.96	C (Medium: some focus on GovTech)	11.79

4. Country Ranking

Table 4: Pillar One Ranking (Digital Skills)

Rank	Country	Score
1	South Africa	25.85
2	Egypt	22.7
3	Algeria	22.2
4	Tunisia	22.15
5	Kenya	21.65
6	Zimbabwe	21.5
7	Cameroon	20.9
8	Seychelles	20.1
9	Namibia	20.05
10	Rwanda	19.7

Table 4: Pillar One Ranking (Digital Skills)

11	Mauritius	19.5
12	Morocco	19.5
13	Tanzania	19.2
14	Cabo Verde	16.3
15	Ghana	16
16	Uganda	15.95
17	Nigeria	14
18	Burundi	13.1
19	Madagascar	12.6
20	Senegal	12.6
21	Eswatini	12.3
22	Sudan	12.05

Table 4: Pillar One Ranking (Digital Skills)

23	Zambia	11.95
24	Angola	11.05
25	Mozambique	10.8
26	Malawi	10.55
27	Benin	10.2
28	Lesotho	9.25
29	Mali	9.25
30	DRC	8.8
31	Botswana	8.7
32	Côte d'Ivoire	8.7
33	Ethiopia	8.05
34	Liberia	7.9

Table 4: Pillar One Ranking (Digital Skills)

35	Mauritania	7.9
36	Togo	7.7
37	Gabon	7.5
38	Comoros	7.45
39	Equatorial Guinea	7.45
40	Sao Tome and Principe	7.3
41	Republic of the Congo (Brazzaville)	6.85
42	Burkina Faso	6.65
43	Eritrea	6.4
44	Sierra Leone	6.35
45	Chad	4.85
46	Gambia	4.75

Table 4: Pillar One Ranking (Digital Skills)		
47	Somalia	4.6
48	Niger	4.1
49	Guinea	3.5
50	Libya	3.5
51	Guinea-Bissau	3
52	Central African Republic	1
53	South Sudan	0.55
54	Djibouti	0.1

4.1.1 Digital Skills Regional Comparison

North Africa

North Africa demonstrates considerable strength in Digital Skills, with three countries (Egypt, Algeria, and Tunisia) ranking in the top five continent-wide. Egypt (22.7 points, rank 2) leverages its extensive higher education system and growing developer community, particularly in Cairo and Alexandria. The country's secondary school completion rates—a component weighted at 15% within this pillar—outperform most other regions, though gender disparities in STEM fields remain a challenge despite government initiatives to address this gap.

Algeria (22.2 points, rank 3) shows remarkable gender parity in STEM education compared to regional peers, a significant achievement for the 10%-weighted indicator of female STEM graduates. Its public university system produces technical graduates at scale, though developer density remains concentrated in major urban centers. Tunisia (22.15 points, rank 4) benefits from robust ICT infrastructure integration into educational systems and growing gig economy participation, especially in digital outsourcing.

Morocco (19.5 points, rank 12) performs moderately well but faces challenges in specialized AI education institutions and developer density. Sudan (12.05 points, rank 22) occupies a middle position within the region, demonstrating a significant gap between it and the top regional performers while still outperforming Libya. Libya's performance (3.5 points, rank 50) reflects the devastating impact of prolonged conflict on educational infrastructure, representing the widest intra-regional disparity across the continent.

Southern Africa

Southern Africa presents the strongest overall performance in Digital Skills, anchored by South Africa's continent-leading score (25.85 points, rank 1). South Africa benefits from a mature higher education workforce (20% pillar weight) and sophisticated ICT skills integration (20% weight) across educational and corporate sectors. The country hosts 9 institutions teaching AI/ML (the highest in Africa) and maintains approximately 118 developers per million population.

Zimbabwe (21.5 points, rank 6) demonstrates surprising resilience despite economic challenges, leveraging its historically strong educational foundation and growing

participation in the digital gig economy. Namibia (20.05 points, rank 9) shows balanced performance across indicators, though with limited specialized AI education opportunities.

The region's performance declines sharply beyond these leaders, with Eswatini (12.3 points, rank 21), Zambia (11.95 points, rank 23), Mozambique (10.8 points, rank 25), and Lesotho (9.25 points, rank 28) all scoring in the middle tier. Botswana's performance (8.7 points, rank 31) is particularly surprising given its economic standing, reflecting challenges in transitioning from resource-based development to knowledge economy foundations.

East Africa

East Africa demonstrates significant variance in Digital Skills readiness. Kenya leads the region (21.65 points, rank 5), distinguished by its innovation in developer communities and informal technology hubs. The country shows particular strength in developer density (15% weight) and gig economy prevalence (10% weight), representing Africa's most dynamic digital freelance marketplace at approximately 36% of the digital workforce.

Rwanda (19.7 points, rank 10), Mauritius (19.5 points, rank 11), and Tanzania (19.2 points, rank 13) form a second tier of solid performers. Rwanda benefits from strategic government investment in education technology, while Mauritius leverages its services-oriented economy and high educational attainment. Tanzania shows steady improvement from a lower base, particularly in secondary education completion rates.

Uganda (15.95 points, rank 16) and Burundi (13.1 points, rank 18) occupy middle positions, while Ethiopia (8.05 points, rank 33) underperforms relative to its economic size and growth, facing challenges in both basic digital literacy and advanced skills development. Somalia (4.6 points, rank 47), Eritrea (6.4 points, rank 43), and South Sudan (0.55 points, rank 53) represent some of the continent's lowest performers, reflecting the impact of conflict and governance challenges on educational infrastructure.

West Africa

West Africa shows mixed performance in Digital Skills development. Ghana (16 points, rank 15) leads the region with balanced development across indicators, though lagging top continental performers. Nigeria (14 points, rank 17) significantly underperforms relative to its economic size and technology startup ecosystem, facing challenges in secondary education completion (15% weight) despite hosting 6 institutions teaching AI/ML and maintaining a substantial total developer population.

Senegal (12.6 points, rank 20) demonstrates moderate performance with particular strength in ICT skills development through targeted educational programs. The region shows sharp decline thereafter, with Benin (10.2 points, rank 27), Mali (9.25 points, rank 29), Côte d'Ivoire (8.7 points, rank 32), Togo (7.7 points, rank 36), and Burkina Faso (6.65 points, rank 42) all facing significant challenges in developing digital talent pipelines.

The lowest tier includes Gambia (4.75 points, rank 46), Sierra Leone (6.35 points, rank 44), Niger (4.1 points, rank 48), Guinea (3.5 points, rank 49), and Guinea-Bissau (3 points, rank 51), where limited educational infrastructure and low digital literacy create fundamental barriers to AI talent development.

Central Africa

Central Africa generally demonstrates the weakest regional performance in Digital Skills, though with notable exceptions. Cameroon leads the region (20.9 points, rank 7), showing particular strength in higher education workforce development and institutional capacity. This performance significantly outpaces regional peers, most of whom occupy the bottom third of continental rankings.

Gabon (7.5 points, rank 37), Equatorial Guinea (7.45 points, rank 39), Democratic Republic of Congo (8.8 points, rank 30), and Republic of Congo (6.85 points, rank 41) all face significant challenges in developing digital skills pipelines, despite substantial natural resource wealth that could potentially fund educational development. Chad (4.85 points, rank 45) and Central African Republic (1 point, rank 52) represent some of the continent's lowest performers, reflecting profound developmental challenges that impact all aspects of education and skills development.

Table 5: Pillar Two Ranking (Data & Infrastructure)

Rank	Country	Score
1	Tunisia	30.75
2	South Africa	30.65
3	Kenya	29.45

Table 5: Pillar Two Ranking (Data & Infrastructure)		
4	Egypt	27.75
5	Ghana	27.65
6	Mauritius	27
7	Morocco	26.1
8	Seychelles	26.1
9	Botswana	25.95
10	Côte d'Ivoire	25.2
11	Rwanda	25.1
12	Uganda	24.6
13	Cabo Verde	23.4
14	Senegal	22.5
15	Nigeria	22.15
16	Cameroon	21.95
17	Algeria	21.7
18	Benin	20.75
19	Eswatini	20.5
20	Namibia	19.6
21	Zambia	19.25

Table 5: Pillar Two Ranking (Data & Infrastructure)		
22	Ethiopia	18.05
23	Zimbabwe	17.9
24	Malawi	17.55
25	Lesotho	17.1
26	Tanzania	16.75
27	Comoros	16.7
28	Angola	16.6
29	Gabon	16.45
30	Mozambique	16
31	Burkina Faso	15.3
32	Libya	14.9
33	Togo	14.45
34	Gambia	14.4
35	Mali	13.45
36	Sudan	13.3
37	Madagascar	13.25
38	Mauritania	13.05
39	Sierra Leone	13.05

Table 5: Pillar Two Ranking (Data & Infrastructure)		
40	Somalia	11.75
41	Eritrea	11.55
42	Equatorial Guinea	11.35
43	Chad	11.2
44	Sao Tome and Principe	11.1
45	Guinea	10.4
46	Republic of the Congo (Brazzaville)	10.3
47	Burundi	10.1
48	Liberia	10
49	Niger	9.45
50	Guinea-Bissau	9.2
51	Central African Republic	9.1
52	DRC	8.95
53	Djibouti	8.7
54	South Sudan	7.85

4.2.1 Data and Infrastructure Regional Comparison

North Africa

North African nations demonstrate strong performance in Data & Infrastructure, leveraging significant investments in connectivity and electricity. Tunisia leads the region and the continent (30.75 points, rank 1), distinguished by near-universal electricity penetration and

extensive 3G network coverage (98%). The country's strong performance in the Inclusive Internet Index (15% weight) reflects successful policies promoting affordable and relevant connectivity.

Egypt (27.75 points, rank 4) and Morocco (26.1 points, rank 7) also perform well, benefiting from substantial investments in telecommunications infrastructure and data center capacity. Both countries demonstrate strong electricity penetration rates exceeding 90% and sophisticated mobile connectivity ecosystems. Algeria's performance (21.7 points, rank 17) lags regional peers despite its strong Digital Skills ranking, reflecting policy challenges in liberalizing telecommunications markets.

Sudan (13.3 points, rank 36) shows significant infrastructure limitations compared to its northern neighbors, with challenges in both electricity access and connectivity. Libya (14.9 points, rank 32) demonstrates the impact of conflict on infrastructure, with deterioration of previously developed systems creating significant barriers to AI ecosystem development.

Southern Africa

Southern Africa shows mixed performance in infrastructure readiness. South Africa nearly matches Tunisia's leadership (30.65 points, rank 2), excelling in data governance frameworks (20% weight) and substantial software investments (5% weight), with the continent's most developed data center ecosystem. Botswana (25.95 points, rank 9) and Eswatini (20.5 points, rank 19) demonstrate relatively strong performance, leveraging economic stability to develop reliable infrastructure.

Namibia (19.6 points, rank 20), Zambia (19.25 points, rank 21), Zimbabwe (17.9 points, rank 23), Lesotho (17.1 points, rank 25), and Angola (16.6 points, rank 28) occupy mid-tier positions, facing challenges in electricity reliability and rural connectivity despite relatively strong urban infrastructure. Mozambique (16 points, rank 30) lags despite significant natural gas resources that could potentially fund infrastructure development.

East Africa

East Africa demonstrates impressive infrastructure development, particularly in mobile connectivity. Kenya (29.45 points, rank 3) has established continental leadership in mobile-first infrastructure, with high scores in mobile connectivity (15% weight) and public trust in digital technologies (15% weight). The country's innovation in mobile financial

services has created an enabling environment for AI applications despite more limited fixed infrastructure.

Mauritius (27 points, rank 6) and Seychelles (26.1 points, rank 7) leverage their island geography and service economies to develop comprehensive connectivity, with near-universal electricity access and strong data governance frameworks. Rwanda (25.1 points, rank 11) and Uganda (24.6 points, rank 12) demonstrate how strategic policy choices can overcome resource limitations, with both countries achieving infrastructure readiness that outpaces their economic development levels.

The region shows significant variance, however, with Tanzania (16.75 points, rank 26), Ethiopia (18.05 points, rank 22), Comoros (16.7 points, rank 27), and Madagascar (13.25 points, rank 37) facing substantial infrastructure challenges. South Sudan (7.85 points, rank 54), Somalia (11.75 points, rank 40), and Eritrea (11.55 points, rank 41) occupy the continent's lowest tier, with less than 20% electricity penetration and minimal data governance frameworks.

West Africa

West African infrastructure development shows notable bright spots amid significant challenges. Ghana (27.65 points, rank 5) leads the region with progressive telecommunications policies and expanding electricity access, particularly leveraging public-private partnerships in broadband development. Côte d'Ivoire (25.2 points, rank 10) has made remarkable progress in infrastructure development post-conflict, prioritizing digital connectivity as an economic accelerator.

Senegal (22.5 points, rank 14) and Nigeria (22.15 points, rank 15) occupy the second regional tier, both facing significant rural-urban digital divides despite strong performance in major cities. Nigeria's infrastructure particularly suffers from electricity reliability challenges (60% access but frequent outages) despite its substantial economic resources.

Benin (20.75 points, rank 18) demonstrates impressive performance relative to its economic size through targeted policy interventions. The region's performance declines progressively through Burkina Faso (15.3 points, rank 31), Togo (14.45 points, rank 33), Gambia (14.4 points, rank 34), Mali (13.45 points, rank 35), Mauritania (13.05 points, rank 38), and Sierra Leone (13.05 points, rank 38), reflecting varying combinations of governance, geographical, and resource challenges.

The lowest regional performers include Guinea (10.4 points, rank 45), Liberia (10 points, rank 48), Niger (9.45 points, rank 49), and Guinea-Bissau (9.2 points, rank 50), where infrastructure deficits create fundamental barriers to digital ecosystem development.

Central Africa

Central Africa faces the most significant infrastructure challenges continent-wide, with no country ranking in the top 25. Gabon leads the region (16.45 points, rank 29) despite substantial oil resources that could potentially fund more advanced infrastructure development. Cameroon (21.95 points, rank 16) shows the strongest overall performance, benefiting from relatively diversified economic development and targeted infrastructure investments.

Equatorial Guinea (11.35 points, rank 42), Chad (11.2 points, rank 43), Republic of Congo (10.3 points, rank 46), and Central African Republic (9.1 points, rank 51) all face profound infrastructure deficits despite varying resource endowments. The Democratic Republic of Congo (8.95 points, rank 52) represents a particularly stark case, where electricity access below 20% and minimal telecommunications infrastructure create nearly insurmountable barriers to digital development despite the country's vast natural resources.

Table 6: Pillar Three Ranking (Government Readiness)

Rank	Country	Score
1	Rwanda	51.6
2	Mauritius	50.45
3	Ghana	49.05
4	Egypt	46.9
5	Tunisia	43
6	Zambia	42.65
7	South Africa	40.5
8	Algeria	40.25
9	Kenya	39.7
10	Tanzania	38.35
11	Senegal	38.3
12	Benin	37.2
13	Cabo Verde	36.55
14	Botswana	33.85
15	Côte d'Ivoire	33.55
16	Morocco	32.8

Table 6: Pillar Three Ranking (Government Readiness)		
17	Cameroon	32.65
18	Malawi	30.9
19	Uganda	30.55
20	Namibia	30.05
21	Nigeria	29.8
22	Angola	28.65
23	Ethiopia	28
24	Zimbabwe	27.2
25	Mali	25.7
26	Seychelles	24.7
27	Lesotho	24.5
28	Togo	21.5
29	Burkina Faso	19.65
30	Gambia	19.05
31	Chad	18.7
32	Niger	17.5
33	Gabon	17
34	Sierra Leone	15.95

Table 6: Pillar Three Ranking (Government Readiness)		
35	Madagascar	15.6
36	Eswatini	15.45
37	Mauritania	15.3
38	Sao Tome and Principe	14.35
39	Mozambique	13.6
40	Guinea	13.05
41	Djibouti	12.65
42	Republic of the Congo (Brazzaville)	11.6
43	Equatorial Guinea	10.25
44	Burundi	10
45	DRC	9.15
46	Liberia	8.8
47	Guinea-Bissau	6.65
48	Comoros	6.55
49	Central African Republic	5.2
50	Libya	5
51	Sudan	4.5
52	Eritrea	4.1

Table 6: Pillar Three Ranking (Government Readiness)		
53	Somalia	2.35
54	South Sudan	1.85

4.3.1 Government Readiness Regional Comparison

North Africa

North African governments demonstrate strong policy frameworks for AI development. Egypt leads the region (46.9 points, rank 4), with a comprehensive national AI strategy (25% weight) aligned with international partnerships, particularly with the UAE and China. The country has established specialized agencies for digital transformation and implemented extensive e-government services.

Tunisia (43 points, rank 5) and Algeria (40.25 points, rank 8) also demonstrate strong government readiness, with clear regulatory frameworks and strategic investment initiatives for emerging technologies. Morocco (32.8 points, rank 16) performs moderately well with particular strength in foundational IT infrastructure (10% weight), though lagging in comprehensive AI strategy development.

Sudan (4.5 points, rank 51) shows extremely limited government readiness, reflecting governance challenges and minimal strategic planning for digital transformation. Libya's governance challenges are similarly reflected in its performance (5 points, rank 50), with collapsed institutions unable to formulate or implement digital transformation policies.

Southern Africa

Southern African governments show mixed performance in technology governance. South Africa (40.5 points, rank 7) leads the region with sophisticated regulatory frameworks and investment promotion, though lacking the comprehensive national AI strategy found in the continent's top performers. Zambia's strong performance (42.65 points, rank 6) is particularly notable, reflecting recent governance reforms and prioritization of digital transformation.

Botswana (33.85 points, rank 14), Namibia (30.05 points, rank 20), and Zimbabwe (27.2 points, rank 24) demonstrate moderate governance readiness, with generally sound regulatory quality but limited specific AI policy frameworks. Eswatini (15.45 points, rank 36), Mozambique (13.6 points, rank 39), and Lesotho (24.5 points, rank 27) lag significantly in government effectiveness and strategic technology planning.

East Africa

East African governments have emerged as continental leaders in AI governance frameworks. Rwanda dominates this pillar continent-wide (51.6 points, rank 1), with the region's most comprehensive national AI strategy integrated into broader economic planning and remarkable government effectiveness in implementation. Mauritius follows closely (50.45 points, rank 2), leveraging its stable governance and regulatory quality to create enabling environments for technology investment.

Kenya (39.7 points, rank 9) and Tanzania (38.35 points, rank 10) demonstrate strong performance, with Kenya particularly excelling in government promotion of investment in emerging technologies (20% weight). Uganda (30.55 points, rank 19) performs moderately well, while Ethiopia (28 points, rank 23) shows improving governance despite historical limitations.

The region's performance declines sharply in conflict-affected or politically unstable countries, with Somalia (2.35 points, rank 53), Eritrea (4.1 points, rank 52), and South Sudan (1.85 points, rank 54) occupying the continent's lowest positions, entirely lacking functional governance frameworks for technology development.

West Africa

West African governments demonstrate significant variance in technology governance. Ghana leads the region (49.05 points, rank 3) with exceptional performance in public sector effectiveness (20% weight) and comprehensive data protection legislation (10% weight). The country's technology investment promotion agencies and regulatory frameworks have created Africa's most enabling environments for startup development outside of the continent's largest economies.

Senegal (38.3 points, rank 11), Benin (37.2 points, rank 12), and Côte d'Ivoire (33.55 points, rank 15) form a second tier of effective governance, each implementing targeted technology development strategies and improving regulatory frameworks. Nigeria's

performance (29.8 points, rank 21) significantly underperforms its economic potential, hampered by fragmented governance approaches to technology and limited policy implementation effectiveness.

The region shows sharp decline thereafter, with governance challenges increasing in Mali (25.7 points, rank 25), Togo (21.5 points, rank 28), Burkina Faso (19.65 points, rank 29), Gambia (19.05 points, rank 30), Niger (17.5 points, rank 32), Sierra Leone (15.95 points, rank 34), and Mauritania (15.3 points, rank 37).

Guinea (13.05 points, rank 40), Liberia (8.8 points, rank 46), and Guinea-Bissau (6.65 points, rank 47) represent some of the continent's weakest governance frameworks for technology development, with minimal strategic planning or implementation capacity.

Central Africa

Central African governments generally demonstrate the weakest regional performance in technology governance, with only Cameroon (32.65 points, rank 17) ranking in the top 20 continent-wide. The country has developed moderate regulatory frameworks and implementation capacity, though lacking a comprehensive national AI strategy.

Angola (28.65 points, rank 22) shows better performance than regional peers despite historical governance challenges, implementing significant digital transformation initiatives in recent years. Chad (18.7 points, rank 31), Gabon (17 points, rank 33), Republic of Congo (11.6 points, rank 42), Equatorial Guinea (10.25 points, rank 43), Democratic Republic of Congo (9.15 points, rank 45), and Central African Republic (5.2 points, rank 49) all face profound governance challenges that create fundamental barriers to strategic technology development.

Table 7: Overall Ranking: AI Talent Readiness Index for Africa

Rank	Country	Score
1	South Africa	52.15
2	Tunisia	51.8
2	Egypt	51.8

Table 7: Overall Ranking: AI Talent Readiness Index for Africa		
4	Kenya	49.7
5	Mauritius	48
6	Rwanda	46.9
7	Ghana	46.5
8	Algeria	45.85
9	Morocco	43.75
10	Seychelles	42.5
11	Cameroon	42.35
12	Cabo Verde	41.6
13	Uganda	39.65
14	Namibia	39.4
15	Senegal	39.35
16	Zimbabwe	38.55
17	Tanzania	38.2
18	Nigeria	37.7
19	Zambia	36.95
20	Botswana	35.95
21	Côte d'Ivoire	34.95

Table 7: Overall Ranking: AI Talent Readiness Index for Africa		
22	Benin	34.9
23	Malawi	31.7
24	Eswatini	30.95
25	Angola	30.1
26	Ethiopia	28.35
27	Lesotho	28.3
28	Madagascar	25.7
29	Mali	24.9
30	Mozambique	24.75
31	Togo	22.05
32	Gabon	21.8
33	Sudan	20.85
34	Burundi	20.35
35	Burkina Faso	20.1
36	Mauritania	18.45
37	Comoros	18.35
38	Gambia	17.2
39	Sierra Leone	15.25

Table 7: Overall Ranking: AI Talent Readiness Index for Africa		
40	Chad	14.2
41	Sao Tome and Principe	14.1
42	Equatorial Guinea	13.95
43	DRC	13.55
44	Liberia	13.1
45	Republic of the Congo (Brazzaville)	12
46	Libya	11.3
47	Niger	10.65
48	Eritrea	10.45
49	Guinea	9.65
50	Somalia	8.95
51	Guinea-Bissau	5.35
52	Djibouti	4.6
53	Central African Republic	4.1
54	South Sudan	1.4

4.4.1 Regional Patterns and Implications: Overall AI Talent Readiness Index

The overall Index reveals distinct regional patterns in AI talent readiness across Africa, with North Africa (4 countries in top 10) and East Africa (3 countries in top 10) demonstrating the strongest overall performance. Southern Africa shows concentrated excellence (South Africa ranks 1st) but significant variance, while West Africa

demonstrates consistent mid-tier performance with Ghana (7th) as its sole top-10 performer. Central Africa faces the most significant challenges, with only Cameroon (11th) breaking into the top 20.

North Africa (Regional Average: 38.2 points)

North Africa's strong performance reflects historical investments in education systems, infrastructure development, and governance reforms. The region benefits from geographic proximity to European markets, enabling technology transfer and talent development partnerships. Tunisia and Egypt stand shoulder to shoulder at rank 2, each earning 51.8 points, a testament to their shared strength in AI readiness. Algeria (45.85 points, rank 8), and Morocco (43.75 points, rank 9) demonstrate balanced development across all three pillars, though with some variation in emphasis—Tunisia excels in infrastructure, Egypt in digital skills, and Algeria in education systems. Egypt has established a National Council for Artificial Intelligence and an African Working Group on AI aimed at developing a unified AI strategy for Africa.

Sudan (20.85 points, rank 33) significantly underperforms its regional peers, particularly struggling in Government Readiness (4.5 points, rank 51) despite moderate performance in Digital Skills (12.05 points, rank 22). This disparity highlights the critical impact of governance frameworks on overall readiness, even when foundational skills exist.

Libya's outlier status (11.3 points, rank 46) demonstrates how conflict can rapidly undermine previously developed capacity, with deterioration across all pillars creating a nearly comprehensive reversal of development gains.

East Africa (Regional Average: 32.7 points)

East Africa demonstrates the most dynamic development trajectory, with strategic policy choices enabling countries to overcome resource constraints. Kenya (49.7 points, rank 4), Mauritius (48 points, rank 5), and Rwanda (46.9 points, rank 6) each demonstrate distinctive development paths—Kenya leveraging mobile innovation and developer communities, Mauritius building on governance excellence and services orientation, and Rwanda implementing comprehensive strategic planning despite limited resources.

The region shows the continent's widest internal disparities, however, with South Sudan (1.4 points, rank 54), Somalia (8.95 points, rank 50), Eritrea (10.45 points, rank 48), and Djibouti (4.6 points, rank 52) occupying some of the lowest positions continent-wide. This

divergence reflects the impact of governance quality and political stability on talent ecosystem development.

Southern Africa (Regional Average: 35.3 points)

Southern Africa's performance is anchored by South Africa's continental leadership (52.15 points, rank 1), which demonstrates balanced excellence across all three pillars. The region benefits from relatively developed infrastructure and governance systems, though with significant challenges in specialized skills development outside South Africa.

The region shows moderate internal variance, with Namibia (39.4 points, rank 14), Zimbabwe (38.55 points, rank 16), Zambia (36.95 points, rank 19), and Botswana (35.95 points, rank 20) forming a solid second tier, while Mozambique (24.75 points, rank 30) and Lesotho (28.3 points, rank 27) face more significant development challenges.

West Africa (Regional Average: 27.6 points)

West Africa demonstrates consistent middle-tier performance with limited extremes. Ghana (46.5 points, rank 7) leads the region through balanced development across all pillars, while no country ranks among the bottom five continent-wide. The region faces particular challenges in infrastructure development, with electricity reliability and rural connectivity representing significant barriers to talent ecosystem growth.

Nigeria's performance (37.7 points, rank 18) warrants particular attention given its economic size and vibrant technology startup ecosystem, suggesting potential for rapid advancement with targeted policy interventions, particularly in education systems and governance frameworks. Cabo Verde (41.6 points, rank 12) stands out as a strong performer in the region, demonstrating how smaller economies can achieve competitive readiness through strategic investments.

The region shows significant variation with Mauritania (18.45 points, rank 36), Gambia (17.2 points, rank 38), Niger (10.65 points, rank 47), Guinea (9.65 points, rank 49), and Guinea-Bissau (5.35 points, rank 51) facing substantial challenges across all dimensions.

Central Africa (Regional Average: 19.4 points)

Central Africa faces the most significant challenges continent-wide, with only Cameroon (42.35 points, rank 11) demonstrating competitive performance. The region faces compound challenges across all pillars, with particularly acute deficits in infrastructure

(electricity access and connectivity) and governance (regulatory frameworks and implementation capacity).

The Democratic Republic of Congo's performance (13.55 points, rank 43) highlights a particularly stark disconnect between resource endowment and talent ecosystem development, while Chad (14.2 points, rank 40), Equatorial Guinea (13.95 points, rank 42), and Central African Republic (4.1 points, rank 53) all face critical development gaps requiring fundamental interventions across all dimensions.

The regional analysis of the AI Talent Readiness Index reveals differentiated pathways for talent ecosystem development across Africa. North African nations demonstrate how sustained investment in education systems and infrastructure create enabling environments for AI talent, while East African leaders like Rwanda and Kenya show how strategic policy choices can overcome resource limitations through focused interventions.

The continent's most significant challenge lies in addressing profound regional disparities, with Central African nations in particular requiring foundational investments across all dimensions. Cross-regional knowledge transfer represents a significant opportunity, with potential for replicating Rwanda's governance innovations, Kenya's mobile-first infrastructure approach, and South Africa's educational ecosystem development in contextually appropriate ways across other regions.

4.5 Country Profiles

The AI Talent Readiness Index reveals both significant challenges and promising foundations for Africa's participation in the Fourth Industrial Revolution. The continent demonstrates substantial diversity in readiness levels, with top performers like South Africa (52.15), Tunisia and Egypt (both 51.8) establishing models for comprehensive ecosystem development across all pillars.

Regional patterns emerge clearly, with North Africa demonstrating the strongest overall performance (regional average: 38.2), followed by Southern Africa (35.3), East Africa (32.7), West Africa (27.6), and Central Africa (19.4). These patterns reflect broader development trajectories but also highlight how targeted policy innovations—exemplified by Rwanda's exceptional governance readiness—can accelerate advancement even in resource-constrained environments.

The most successful countries exhibit balanced development across all three pillars, recognizing that digital skills, enabling infrastructure, and supportive governance frameworks are interdependent dimensions of AI talent readiness. By addressing identified gaps while leveraging regional strengths—North Africa's educational infrastructure, East Africa's policy innovation, Southern Africa's technical expertise, West Africa's entrepreneurial dynamism, and Central Africa's emerging potential—Africa can bridge its AI talent deficit and harness the technology's transformative economic potential.

1. South Africa

Overall Rank: 1 | Overall Score: 52.15

Pillar Performance:

- **Digital Skills:** Rank 1 (25.85)
- **Data & Infrastructure:** Rank 2 (30.65)
- **Government Readiness:** Rank 7 (40.5)

South Africa leads the continent in AI talent readiness, ranking first overall with a balanced performance across all three pillars. The country demonstrates particular strength in Digital Skills, where it ranks first with a score of 25.85, reflecting its robust higher education system and technical training infrastructure. In Data & Infrastructure, South Africa ranks second (30.65), indicating well-developed physical systems to support AI development. While Government Readiness represents its relatively lowest performance (rank 7, score 40.5), this remains strong in continental context. South Africa shows a strong adult literacy rate of 87%, with 82% of its labor force having advanced education. ICT skills in education are at 35.46%, and 42.8% of STEM graduates are female. The gig economy prevalence is 33.72%, and the country has a strong 2234 developers per million population, along with 24 higher learning institutions teaching AI/Machine Learning. The country shows high internet usage with 75% of the population online, and 86.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is high at 69.53, with a Data Governance score of 32. The trust level in digital technologies is 53.45, and a very high 97.45% of the population has 3G mobile network coverage. Computer software spending is high at 36.33. Despite still developing its National AI Strategy, the country stands out as the only country with an "A" rating (Very high) on the GovTech Maturity Index, establishing itself as a GovTech leader. The country demonstrates moderate strength in regulatory quality (44.34) and government effectiveness (40.57), creating a solid foundation for technological governance. South

Africa's established data protection legislation and modest investment promotion score (25.92) complete its profile as a regional technology leader with strong institutional capabilities. As Southern Africa's economic powerhouse, South Africa leads regional performance and establishes benchmarks for the continent's AI talent development.

2. Tunisia

Overall Rank: 2 (tied) | Overall Score: 51.8

Pillar Performance:

- **Digital Skills:** Rank 4 (22.15)
- **Data & Infrastructure:** Rank 1 (30.75)
- **Government Readiness:** Rank 5 (43.0)

Tunisia shares the second position overall with Egypt, demonstrating exceptional strength in Data & Infrastructure where it ranks first continent-wide (30.75). This reflects its significant investments in connectivity and digital foundations. The country performs consistently across all pillars, ranking 4th in Digital Skills (22.15) and 5th in Government Readiness (43.0). Tunisia shows an adult literacy rate of 79%, with 67.2% of its labor force having advanced education. ICT skills in education are high at 71.37%, and a significant 55.4% of STEM graduates are female. The gig economy prevalence is lower at 22.09%, but the country boasts a very high 4120 developers per million population and 11 higher learning institutions teaching AI/Machine Learning. Tunisia shows high internet usage with 74% of the population online, and 100% have electricity access. Its GSMA Mobile Connectivity Index ranking is 63.31, with a Data Governance score of 50. The trust level in digital technologies is 40.11, and 88.89% of the population has 3G mobile network coverage. Computer software spending is at 26.82. Tunisia has released its National AI Strategy and established data protection legislation. The country scores poorly in investment promotion (17.58) and regulatory quality (28.77), with moderate government effectiveness (39.15). Tunisia's "High" GovTech Maturity Index indicates significant focus on government technology initiatives, creating a mixed picture of technological readiness with strategic vision but implementation challenges. Tunisia's balanced approach across technical, infrastructure, and policy dimensions makes it a leading model for North African and Mediterranean nations seeking to build comprehensive AI ecosystems.

3. Egypt

Overall Rank: 2 (tied) | Overall Score: 51.8

Pillar Performance:

- **Digital Skills:** Rank 2 (22.7)
- **Data & Infrastructure:** Rank 4 (27.75)
- **Government Readiness:** Rank 4 (46.9)

Egypt ties with Tunisia for second place overall, showcasing strong performance across all dimensions of AI talent readiness. The country ranks 2nd in Digital Skills (22.7), 4th in Data & Infrastructure (27.75), and 4th in Government Readiness (46.9). Egypt's adult literacy rate is 71.1%, with 75.9% of its labor force having advanced education. ICT skills in education are at 53.06%, and 36.9% of STEM graduates are female. The gig economy is highly prevalent at 85.17%, and the country has a strong 1224 developers per million population, along with 40 higher learning institutions teaching AI/Machine Learning. Egypt has high internet usage with 72% of the population online, and 100% have electricity access. Its GSMA Mobile Connectivity Index ranking is 66.57, with a Data Governance score of 17. The trust level in digital technologies is 31.97, and a very high 97.68% of the population has 3G mobile network coverage. Computer software spending is at 25.09. Egypt has released its National AI Strategy and established data protection legislation. The country performs well in investment promotion (47.21) despite lower regulatory quality (26.89) and moderate government effectiveness (41.98). Egypt's "High" GovTech Maturity Index highlights significant focus on digital governance, demonstrating strategic commitment to technological advancement despite regulatory challenges. This balanced profile reflects Egypt's strategic emphasis on technology education, infrastructure development, and policy frameworks to support AI advancement. As one of North Africa's largest economies, Egypt's consistent high ranking demonstrates how combining educational excellence, infrastructure investment, and policy vision can create a comprehensive foundation for AI talent development.

4. Kenya

Overall Rank: 4 | Overall Score: 49.7

Pillar Performance:

- **Digital Skills:** Rank 5 (21.65)

- **Data & Infrastructure:** Rank 3 (29.45)
- **Government Readiness:** Rank 9 (39.7)

Kenya ranks 4th continent-wide, establishing itself as East Africa's leader in AI talent readiness with particularly strong performance in Data & Infrastructure (rank 3, score 29.45). This reflects the country's pioneering mobile-first innovations and digital infrastructure investments. Kenya also demonstrates solid capability in Digital Skills (rank 5, score 21.65) and Government Readiness (rank 9, score 39.7). The country shows a strong adult literacy rate of 81.5%, with 69.1% of its labor force having advanced education. ICT skills in education are high at 67.54%, and 30.7% of STEM graduates are female. The gig economy is prevalent at 56.10%, and the country has a notable 1095 developers per million population, along with 18 higher learning institutions teaching AI/Machine Learning. Kenya has 41% of its population using the internet, and 76.0% with electricity access. Its GSMA Mobile Connectivity Index ranking is 50.65, with a Data Governance score of 46. The trust level in digital technologies adoption is 48.38, and 78.92% of the population is covered by at least a 3G mobile network. Computer software spending is at 13.95. The country's technology innovation hubs, particularly in Nairobi, have fostered a dynamic ecosystem that supports AI skill development and deployment, making Kenya a model for mobile-led technological advancement in emerging economies. Kenya released its National AI Strategy as this report was being written, on 27th March 2025, and has established data protection legislation. The country performs well in investment promotion (40.97) with moderate regulatory quality (37.74) and government effectiveness (38.68). Kenya's "High" GovTech Maturity Index reflects its reputation as a technology hub in East Africa, demonstrating strong potential for AI readiness despite ongoing governance challenges.

5. Mauritius

Overall Rank: 5 | Overall Score: 48.0

Pillar Performance:

- **Digital Skills:** Rank 11 (19.5)
- **Data & Infrastructure:** Rank 6 (27.0)
- **Government Readiness:** Rank 2 (50.45)

Mauritius ranks 5th overall, distinguished by its exceptional performance in Government Readiness where it ranks 2nd continent-wide (50.45). This reflects the island nation's

strategic policy frameworks and enabling regulatory environment for technology adoption. While its Digital Skills ranking is relatively lower (11th, score 19.5), the country compensates with strong Data & Infrastructure capabilities (rank 6, score 27.0). Mauritius has a high adult literacy rate of 91.3%, with 74.7% of its labor force having advanced education. ICT skills in education are at 45.82%, and 36% of STEM graduates are female. The gig economy prevalence is 34.01%, and the country has a strong 1345 developers per million population, but only 2 higher learning institutions teaching AI/Machine Learning. Mauritius has high internet usage with 76% of the population online, and 100% have electricity access. Its GSMA Mobile Connectivity Index ranking is high at 69.3, but data on Data Governance is unavailable. The trust level in digital technologies is 51.84, and 88.89% of the population has 3G mobile network coverage. Computer software spending is at 12.79. Mauritius exhibits exceptional governance capabilities with the highest regulatory quality score (82.55) among all African nations and impressive government effectiveness (75.00). The country has released its National AI Strategy and established data protection legislation, creating a comprehensive framework for technological advancement. Though scoring moderately in government promotion of investment in emerging tech (35.54), Mauritius's overall institutional strength and digital governance capabilities make it a model for government readiness in Africa. Mauritius demonstrates how smaller economies can leverage focused policy interventions and governance excellence to create attractive environments for AI talent development and retention.

6. Rwanda

Overall Rank: 6 | Overall Score: 46.9

Pillar Performance:

- **Digital Skills:** Rank 10 (19.7)
- **Data & Infrastructure:** Rank 11 (25.1)
- **Government Readiness:** Rank 1 (51.6)

Rwanda ranks 6th overall, delivering a standout performance in Government Readiness where it ranks 1st continent-wide (51.6). This remarkable achievement highlights Rwanda's strategic vision and policy execution in creating an enabling environment for technology advancement. While ranking 10th in Digital Skills (19.7) and 11th in Data & Infrastructure (25.1), Rwanda's governance excellence demonstrates how visionary leadership and strategic policy frameworks can help overcome resource constraints. Rwanda has an adult

literacy rate of 73.2%, and 72.2% of its labor force has advanced education. ICT skills in education are at 61.42%, and 35.4% of STEM graduates are female. The gig economy prevalence is 44.77%, and there are 610 developers per million people, with 6 higher learning institutions teaching AI/Machine Learning. Rwanda shows 34% of its population using the internet, and 50.6% have electricity access. Its GSMA Mobile Connectivity Index ranking is 46.06, with a Data Governance score of 40. The trust level in digital technologies is 38.44, and a high 89.63% of the population has 3G mobile network coverage. Computer software spending is at 3.67. Rwanda demonstrates exceptional commitment to AI adoption with a comprehensive national strategy and scores remarkably well in promoting investment in emerging technologies (65.69) and government effectiveness (65.09). The country's regulatory framework is well-developed, with a regulatory quality score of 56.13, complemented by a high GovTech Maturity Index indicating significant focus on government technology initiatives. Rwanda's coordinated approach to policy development and implementation positions it as a continental leader in AI readiness. The country serves as a powerful example of how deliberate government action can accelerate AI readiness despite infrastructure limitations.

7. Ghana

Overall Rank: 7 | Overall Score: 46.5

Pillar Performance:

- **Digital Skills:** Rank 15 (16.0)
- **Data & Infrastructure:** Rank 5 (27.65)
- **Government Readiness:** Rank 3 (49.05)

Ghana ranks 7th overall, showcasing exceptional strength in Government Readiness where it ranks 3rd continent-wide (49.05) and strong Data & Infrastructure capabilities (rank 5, score 27.65). These achievements reflect Ghana's strategic policy approach and investments in enabling infrastructure for digital growth. While Digital Skills represents its relative weakness (rank 15, score 16.0), Ghana's balanced development across other dimensions makes it West Africa's highest-performing nation. Ghana boasts an adult literacy rate of 79%, with 65.4% of its labor force holding advanced education. ICT skills in education are at 47.12%, and 19.8% of graduates in STEM courses are female. The gig economy is prevalent at 36.63%, and there are 661 developers per million people, along with 20 higher learning institutions teaching AI/Machine Learning. The country shows a

higher internet usage with 70% of the population online, and 85.1% have electricity access. Its GSMA Mobile Connectivity Index ranking is 55.14, with a Data Governance score of 32. The trust level in digital technologies is 44.51, and a high 94.30% of the population has 3G mobile network coverage. Computer software spending is lower at 0.81. Ghana also demonstrates strong government readiness with a released National AI Strategy, established data protection legislation, and relatively high scores across key indicators. The country performs well in government promotion of investment in emerging tech (46.65), regulatory quality (45.28), and government effectiveness (47.17). Ghana's "High" GovTech Maturity Index indicates significant focus on government technology initiatives, positioning it as a regional leader in West Africa for government readiness and digital transformation. The country demonstrates how prioritizing governance frameworks and infrastructure development can create foundations for AI talent ecosystems even while building technical capacity

8. Algeria

Overall Rank: 8 | Overall Score: 45.85

Pillar Performance:

- **Digital Skills:** Rank 3 (22.2)
- **Data & Infrastructure:** Rank 17 (21.7)
- **Government Readiness:** Rank 8 (40.25)

Algeria ranks 8th overall, with particular strength in Digital Skills where it ranks 3rd continent-wide (22.2). This highlights Algeria's investments in technical education and human capital development. The country also performs well in Government Readiness (rank 8, score 40.25), though its Data & Infrastructure capabilities represent a relative weakness (rank 17, score 21.7). Algeria has an adult literacy rate of 81.4%. Data on the labor force with advanced education is unavailable, but ICT skills in education are at 58.48%. A high 58.2% of STEM graduates are female, and the gig economy prevalence is 59.59%. The country has 477 developers per million population and 22 higher learning institutions teaching AI/Machine Learning. Algeria has high internet usage with 71% of the population online, and 100% have electricity access. Its GSMA Mobile Connectivity Index ranking is 54.5, but data on Data Governance is unavailable. The trust level in digital technologies is low at 18.72, and 80.64% of the population has 3G mobile network coverage. Computer software spending is very low at 0.42. Algeria has released its National

AI Strategy and established data protection legislation. The country performs relatively well in investment promotion (41.19) but poorly in regulatory quality (16.04) and government effectiveness (27.36). Algeria's "Medium" GovTech Maturity Index suggests some focus on digital governance, though significant implementation challenges remain. Algeria's profile suggests that while technical talent development has been prioritized, infrastructure investments may need attention to fully leverage this human capital. As part of North Africa's strong regional performance, Algeria contributes to the region's leadership in AI talent readiness.

9. Morocco

Overall Rank: 9 | Overall Score: 43.75

Pillar Performance:

- **Digital Skills:** Rank 12 (19.5)
- **Data & Infrastructure:** Rank 7 (26.1)
- **Government Readiness:** Rank 16 (32.8)

Morocco ranks 9th overall, with its strongest performance in Data & Infrastructure (rank 7, score 26.1), reflecting significant investments in connectivity and physical systems to support digital development. The country demonstrates solid capability in Digital Skills (rank 12, score 19.5) but shows relatively weaker performance in Government Readiness (rank 16, score 32.8). Morocco has an adult literacy rate of 73.7%. Data on the labor force with advanced education is unavailable, but ICT skills in education are at 60.86%. A significant 45.3% of STEM graduates are female, and the gig economy prevalence is 39.83%. The country has a strong 1345 developers per million population and 7 higher learning institutions teaching AI/Machine Learning. Morocco shows high internet usage with 90% of the population online, and 100% have electricity access. Its GSMA Mobile Connectivity Index ranking is 62.03, with a high Data Governance score of 9. The trust level in digital technologies is 40.15, and a high 94.30% of the population has 3G mobile network coverage. Computer software spending is at 22.64. The country's profile suggests that while technical and infrastructure foundations are strong, enhanced policy frameworks and governance approaches could further elevate its AI talent readiness. As part of North Africa's strong regional showing, Morocco contributes to the region's continental leadership.

10. Seychelles

Overall Rank: 10 | Overall Score: 42.5

Pillar Performance:

- **Digital Skills:** Rank 8 (20.1)
- **Data & Infrastructure:** Rank 8 (26.1)
- **Government Readiness:** Rank 26 (24.7)

Seychelles ranks 10th overall, with balanced strengths in Digital Skills (rank 8, score 20.1) and Data & Infrastructure (rank 8, score 26.1). However, the country shows significantly weaker performance in Government Readiness (rank 26, score 24.7). This profile suggests that while Seychelles has developed solid technical capabilities and infrastructure, policy frameworks and governance approaches to AI advancement may require attention. The country has a very high adult literacy rate of 95.9%, with a very high 86.6% of its labor force having advanced education. Data on ICT skills in education is unavailable, and 31.6% of STEM graduates are female. The gig economy prevalence is 42.73%, but information on developers per million population is unavailable, and the country has 2 higher learning institutions teaching AI/Machine Learning. Seychelles has very high internet usage with 87% of the population online, and 100.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is high at 69.27, but data on Data Governance is unavailable. The trust level in digital technologies is high at 50.59, and 88.89% of the population has 3G mobile network coverage. Computer software spending is at 7.54. The county has not released a National AI Strategy, and data on data protection legislation and investment promotion is unavailable. However, the country demonstrates strong regulatory quality (58.96) and exceptional government effectiveness (70.75). Seychelles's "Medium" GovTech Maturity Index suggests ongoing development of digital governance capabilities, with impressive institutional strength despite policy gaps. As a small island nation, Seychelles demonstrates how focused investments in skills and infrastructure can create foundations for AI talent development even with limited scale.

11. Cameroon

Overall Rank: 11 | Overall Score: 42.35

Pillar Performance:

- **Digital Skills:** Rank 7 (20.9)

- **Data & Infrastructure:** Rank 16 (21.95)
- **Government Readiness:** Rank 17 (32.65)

Cameroon ranks 11th overall, standing out as Central Africa's highest-performing nation by a significant margin. The country demonstrates particular strength in Digital Skills (rank 7, score 20.9), reflecting investments in technical education and human capital development. Cameroon shows relatively balanced performance across Data & Infrastructure (rank 16, score 21.95) and Government Readiness (rank 17, score 32.65). Cameroon reports an adult literacy rate of 77.1%, with 77.4% of its labor force having advanced education. ICT skills in education are at 50.98%, and 32.3% of STEM graduates are female. The gig economy prevalence is high at 56.10%, and the country has 353 developers per million population, along with 6 higher learning institutions teaching AI/Machine Learning. Cameroon has 44% of its population using the internet, and 71.0% with electricity access. Its GSMA Mobile Connectivity Index ranking is 49.06, with a Data Governance score of 25. The trust level in digital technologies is low at 26.26, and a very low 1.54% of the population has 3G mobile network coverage. Computer software spending is at 11.00. The country is developing its National AI Strategy and has established data protection legislation. The country performs relatively well in investment promotion (45.59) despite poor regulatory quality (19.34) and very low government effectiveness (17.45). Cameroon's "Medium" GovTech Maturity Index suggests some focus on digital governance, though significant implementation challenges remain. As the sole Central African nation in the top tier of performers, Cameroon provides an important model for regional neighbors facing significant AI readiness challenges.

12. Cabo Verde

Overall Rank: 12 | Overall Score: 41.6

Pillar Performance:

- **Digital Skills:** Rank 14 (16.3)
- **Data & Infrastructure:** Rank 13 (23.4)
- **Government Readiness:** Rank 13 (36.55)

Cabo Verde ranks 12th overall, demonstrating remarkably consistent performance across all three pillars: Digital Skills (rank 14, score 16.3), Data & Infrastructure (rank 13, score 23.4), and Government Readiness (rank 13, score 36.55). Cabo Verde shows a high adult literacy rate of 86.8%, with 70.6% of its labor force having advanced education. ICT skills in

education are at 58.52%, and 42.4% of STEM graduates are female. The gig economy prevalence is 34.01%, but information on developers per million population is unavailable, and the country has only 1 higher learning institution teaching AI/Machine Learning. The country has high internet usage with 72% of the population online, and 97.1% have electricity access. Its GSMA Mobile Connectivity Index ranking is 55.63, but data on Data Governance is unavailable. The trust level in digital technologies is low at 29.36, and 49.41% of the population has 3G mobile network coverage. Computer software spending is at 24.73. Cabo Verde, despite not having released a National AI Strategy, demonstrates remarkable government readiness through established data protection legislation and strong scores in investment promotion (45.22), regulatory quality (52.36), and government effectiveness (59.91). Its "High" GovTech Maturity Index illustrates significant focus on digital governance, making Cabo Verde a notable performer in small-state digital transformation. This balanced profile suggests a holistic approach to AI talent development that addresses technical, infrastructure, and policy dimensions in parallel. As a small island nation, Cabo Verde shows how focused and coordinated investments across all readiness dimensions can create effective AI talent ecosystems despite limited scale.

13. Uganda

Overall Rank: 13 | Overall Score: 39.65

Pillar Performance:

- **Digital Skills:** Rank 16 (15.95)
- **Data & Infrastructure:** Rank 12 (24.6)
- **Government Readiness:** Rank 19 (30.55)

Uganda ranks 13th overall, with its strongest performance in Data & Infrastructure (rank 12, score 24.6), reflecting investments in digital connectivity and enabling systems. The country shows similar levels of capability in Digital Skills (rank 16, score 15.95) and Government Readiness (rank 19, score 30.55). Uganda reports an adult literacy rate of 76.5%, with a high 89.2% of its labor force having advanced education. Data on ICT skills in education and female STEM graduates is unavailable, but the gig economy prevalence is 25.29%. The country has 287 developers per million population and 8 higher learning institutions teaching AI/Machine Learning. Uganda has a very low internet usage with only 10% of the population online, and 47.1% have electricity access. Its GSMA Mobile Connectivity Index ranking is 42.27, with a Data Governance score of 50. The trust level in

digital technologies is 36.62, and a low 17.10% of the population has 3G mobile network coverage. Computer software spending is also low at 0.82. Uganda has not released a National AI Strategy but has established data protection legislation. The country scores modestly in investment promotion (27.09) and regulatory quality (32.55), with moderate government effectiveness (31.60). Uganda's "High" GovTech Maturity Index indicates significant focus on digital governance initiatives despite the absence of a formal AI strategy. Uganda's relatively balanced profile indicates a holistic approach to AI talent readiness, though all dimensions have room for enhancement. As part of East Africa's dynamic technology landscape, Uganda contributes to the region's progressive stance on digital transformation.

14. Namibia

Overall Rank: 14 | Overall Score: 39.4

Pillar Performance:

- **Digital Skills:** Rank 9 (20.05)
- **Data & Infrastructure:** Rank 20 (19.6)
- **Government Readiness:** Rank 20 (30.05)

Namibia ranks 14th overall, with notable strength in Digital Skills where it ranks 9th continent-wide (20.05). This suggests significant investments in technical education and human capital development. The country shows equal performance in Data & Infrastructure (rank 20, score 19.6) and Government Readiness (rank 20, score 30.05), indicating balanced but moderate capability in these dimensions. Namibia reports a high adult literacy rate of 91.5%, with 79% of its labor force having advanced education. ICT skills in education are at 31.42%, and 42.5% of STEM graduates are female. The gig economy prevalence is 37.50%, but information on developers per million population is unavailable, and the country has only 2 higher learning institutions teaching AI/Machine Learning. The country has moderate internet usage with 62% of the population online, and 56.2% have electricity access. Its GSMA Mobile Connectivity Index ranking is 51.62, with a Data Governance score of 17. The trust level in digital technologies is low at 27.65, and 25.54% of the population has 3G mobile network coverage. Computer software spending is at 9.24. Namibia has not released a National AI Strategy and only has draft data protection legislation. The country scores modestly in investment promotion (20.03) but performs well in regulatory quality (51.42) and government effectiveness (52.83). Namibia's "Medium"

GovTech Maturity Index suggests ongoing development of digital governance capabilities, with strong institutional foundations despite policy gaps. Namibia's profile suggests that while technical talent development has been prioritized, infrastructure and governance frameworks may require additional attention to fully leverage this human capital.

15. Senegal

Overall Rank: 15 | Overall Score: 39.35

Pillar Performance:

- **Digital Skills:** Rank 20 (12.6)
- **Data & Infrastructure:** Rank 14 (22.5)
- **Government Readiness:** Rank 11 (38.3)

Senegal ranks 15th overall, with its strongest performance in Government Readiness (rank 11, score 38.3) and solid capability in Data & Infrastructure (rank 14, score 22.5). However, the country shows weaker performance in Digital Skills (rank 20, score 12.6), suggesting this as an area for targeted development. Senegal has an adult literacy rate of 52%, and 67.8% of its labor force has advanced education. The ICT skills in its education system are at 61.68%. Data on female STEM graduates is not available, but the gig economy prevalence is 45.06%. The country has 565 developers per million population and 3 higher learning institutions focused on AI/Machine Learning. Senegal has 60% of its population using the internet, and 67.9% with electricity access. Its GSMA Mobile Connectivity Index ranking is 48.18, and the Data Governance score is 13. The trust level in digital technologies adoption is 28.00, and a high 94.30% of the population is covered by at least a 3G mobile network. Computer software spending is at 22.05. The country is also developing its National AI Strategy with data protection legislation in place. While scoring modestly in promoting investment in emerging technologies (25.18), the country performs relatively better in regulatory quality (39.15) and exceptionally well in government effectiveness (54.25) compared to regional peers. With a "Medium" GovTech Maturity rating, Senegal demonstrates promising institutional capacity despite ongoing challenges in creating an investment-friendly environment for emerging technologies. Senegal's profile indicates effective policy frameworks and infrastructure investments that have outpaced human capital development in the AI space. As one of West Africa's stronger performers, Senegal demonstrates how governance excellence can create foundations for AI talent ecosystems while technical capacity continues to develop.

16. Zimbabwe

Overall Rank: 16 | Overall Score: 38.55

Pillar Performance:

- **Digital Skills:** Rank 6 (21.5)
- **Data & Infrastructure:** Rank 23 (17.9)
- **Government Readiness:** Rank 24 (27.2)

Zimbabwe ranks 16th overall, with exceptional strength in Digital Skills where it ranks 6th continent-wide (21.5). This highlights Zimbabwe's investments in technical education and human capital development despite broader economic challenges. The country shows relatively weaker performance in Data & Infrastructure (rank 23, score 17.9) and Government Readiness (rank 24, score 27.2). Zimbabwe has a high adult literacy rate of 88.7%, with a very high 94% of its labor force having advanced education. ICT skills in education are at 57.36%, and 28.8% of STEM graduates are female. The gig economy prevalence is very low at 0.00%, but the country has 504 developers per million population and 6 higher learning institutions teaching AI/Machine Learning. Zimbabwe has low internet usage with 33% of the population online, and 50.1% have electricity access. Its GSMA Mobile Connectivity Index ranking is 41.54, but data on Data Governance is unavailable. The trust level in digital technologies is low at 27.78, and 19.06% of the population has 3G mobile network coverage. Computer software spending is at 20.45. Zimbabwe is developing its National AI Strategy and has established data protection legislation. The country scores moderately in investment promotion (29.20) but performs extremely poorly in regulatory quality (8.96) and government effectiveness (11.79). Zimbabwe's "Medium" GovTech Maturity Index suggests some focus on digital governance initiatives despite severe regulatory and implementation challenges. Zimbabwe's profile suggests that while technical talent development has been prioritized, infrastructure investments and governance frameworks require attention to fully leverage this human capital. The country demonstrates resilience in maintaining educational excellence despite broader systemic challenges.

17. Tanzania

Overall Rank: 17 | Overall Score: 38.2

Pillar Performance:

- **Digital Skills:** Rank 13 (19.2)
- **Data & Infrastructure:** Rank 26 (16.75)
- **Government Readiness:** Rank 10 (38.35)

Tanzania ranks 17th overall, with contrasting strengths and weaknesses across pillars. The country demonstrates exceptional performance in Government Readiness (rank 10, score 38.35) and solid capability in Digital Skills (rank 13, score 19.2). However, Data & Infrastructure represents a significant weakness (rank 26, score 16.75). Tanzania has an adult literacy rate of 77.9%, with a very high 94.3% of its labor force having advanced education. ICT skills in education are at 50.24%. Data on female STEM graduates is unavailable, and the gig economy prevalence is 38.08%. The country has a lower 135 developers per million population and 8 higher learning institutions teaching AI/Machine Learning. The country has low internet usage with 32% of the population online, and 45.8% have electricity access. Its GSMA Mobile Connectivity Index ranking is 43.86, but data on Data Governance is unavailable. The trust level in digital technologies is 35.85, and 17.10% of the population has 3G mobile network coverage. Computer software spending is very low at 0.50. Tanzania is developing its National AI Strategy and has established data protection legislation. The country performs impressively in investment promotion (53.56) with moderate regulatory quality (30.19) and government effectiveness (34.91). Tanzania's "High" GovTech Maturity Index indicates significant focus on digital governance, positioning it as a regional leader in technological readiness. Tanzania's profile suggests effective policy frameworks and reasonable investment in technical education, but infrastructure limitations may constrain the application of this capability. As part of East Africa's dynamic technology landscape, Tanzania contributes to the region's progressive stance on AI governance.

18. Nigeria

Overall Rank: 18 | Overall Score: 37.7

Pillar Performance:

- **Digital Skills:** Rank 17 (14.0)
- **Data & Infrastructure:** Rank 15 (22.15)
- **Government Readiness:** Rank 21 (29.8)

Nigeria ranks 18th overall, a position that warrants attention given its status as Africa's largest economy and home to a vibrant startup ecosystem. The country demonstrates relatively balanced performance across all three pillars: Digital Skills (rank 17, score 14.0), Data & Infrastructure (rank 15, score 22.15), and Government Readiness (rank 21, score 29.8). Adult literacy rate stands at 62%, with 74.3% of the labor force having advanced education. The ICT skills within the education system are at 42.19%, and while data on female STEM graduates is unavailable, the prevalence of the gig economy is 26.95%. The country has a relative number of 556 developers per million population and 71 institutions of higher learning that teach AI/Machine Learning. 35% of the population uses the internet, and 60.5% have electricity access. The country ranks 52.63 in the GSMA Mobile Connectivity Index and has a Data Governance score of 30. The level of trust in digital technologies adoption is 37.66, and 26.99% of the population is covered by at least a 3G mobile network. Computer software spending is at 14.06. Nigeria is developing its National AI Strategy and has data protection legislation in place, showing commitment to digital transformation. However, the country faces significant challenges with low scores in government promotion of investment in emerging tech (18.14), regulatory quality (16.98), and government effectiveness (20.28). Nigeria's GovTech Maturity Index is rated as "Medium," indicating some focus on government technology initiatives. Despite having Africa's largest economy, Nigeria's government readiness for AI adoption is hampered by regulatory inefficiencies and implementation challenges. Nigeria's mid-tier ranking despite its economic scale suggests significant unrealized potential that could be activated through targeted policy interventions, particularly in education and governance frameworks. The country's dynamic private sector provides a foundation for accelerated AI talent development with appropriate enabling conditions.

19. Zambia

Overall Rank: 19 | Overall Score: 36.95

Pillar Performance:

- **Digital Skills:** Rank 23 (11.95)
- **Data & Infrastructure:** Rank 21 (19.25)
- **Government Readiness:** Rank 6 (42.65)

Zambia ranks 19th overall, with exceptional strength in Government Readiness where it ranks 6th continent-wide (42.65). This reflects Zambia's strategic policy frameworks and

enabling regulatory environment for technology adoption. However, the country shows significantly weaker performance in Digital Skills (rank 23, score 11.95) and moderate capability in Data & Infrastructure (rank 21, score 19.25). Zambia reports a high adult literacy rate of 86.7%, with 73.9% of its labor force having advanced education. ICT skills in education are at 47.18%. Data on female STEM graduates is unavailable, and the gig economy prevalence is 18.90%. Information on developers per million population is unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. The country has low internet usage with 31% of the population online, and 47.8% have electricity access. Its GSMA Mobile Connectivity Index ranking is 44.78, but data on Data Governance is unavailable. The trust level in digital technologies is 34.81, and 58.31% of the population has 3G mobile network coverage. Computer software spending is at 2.14. Zambia has released its National AI Strategy and established data protection legislation. The country scores moderately in investment promotion (34.02) and regulatory quality (33.49), with somewhat lower government effectiveness (27.83). Zambia's "Medium" GovTech Maturity Index indicates ongoing development of digital governance capabilities, demonstrating strategic commitment despite implementation challenges. Zambia's profile suggests that while governance excellence has created policy foundations for AI advancement, targeted investments in technical education and infrastructure may be needed to activate this potential.

20. Botswana

Overall Rank: 20 | Overall Score: 35.95

Pillar Performance:

- **Digital Skills:** Rank 31 (8.7)
- **Data & Infrastructure:** Rank 9 (25.95)
- **Government Readiness:** Rank 14 (33.85)

Botswana ranks 20th overall, with a stark contrast between its strong Data & Infrastructure capability (rank 9, score 25.95) and weak Digital Skills performance (rank 31, score 8.7). The country also demonstrates solid Government Readiness (rank 14, score 33.85). Botswana's adult literacy rate data is unavailable, but 72.4% of its labor force has advanced education. ICT skills in education are at 57.32%. Data on female STEM graduates is unavailable, and the gig economy prevalence is 34.54%. Information on developers per million population is unavailable, and the country has 3 higher learning institutions teaching AI/Machine

Learning. The country has high internet usage with 77% of the population online, and 75.9% have electricity access. Its GSMA Mobile Connectivity Index ranking is 60.08, with a Data Governance score of 45. The trust level in digital technologies is 36.55, and 78.92% of the population has 3G mobile network coverage. Computer software spending is at 10.96. Botswana has not released a National AI Strategy but has established data protection legislation. The country scores modestly in investment promotion (25.74) but performs very well in regulatory quality (66.98) and government effectiveness (66.98). Botswana's "Medium" GovTech Maturity Index suggests some focus on digital governance, with strong institutional foundations despite the absence of a formal AI strategy. Botswana's profile suggests significant investments in physical infrastructure and governance frameworks that have outpaced human capital development in the AI space. This indicates a need for targeted interventions in technical education and skills development to leverage the country's strong infrastructure foundations.

21. Côte d'Ivoire

Overall Rank: 21 | Overall Score: 34.95

Pillar Performance:

- **Digital Skills:** Rank 32 (8.7)
- **Data & Infrastructure:** Rank 10 (25.2)
- **Government Readiness:** Rank 15 (33.55)

Côte d'Ivoire ranks 21st overall, with a profile remarkably similar to Botswana's. The country shows strong performance in Data & Infrastructure (rank 10, score 25.2) and Government Readiness (rank 15, score 33.55), but significantly weaker capability in Digital Skills (rank 32, score 8.7). This suggests that while Côte d'Ivoire has made substantial investments in infrastructure and governance frameworks, human capital development requires targeted attention. As one of West Africa's more promising economies, Côte d'Ivoire demonstrates how infrastructure investments can create foundations for AI talent ecosystems while technical capacity continues to develop. Côte d'Ivoire has a low adult literacy rate of 47.2%, with a lower 42% of its labor force having advanced education. ICT skills in education are high at 67.65%. Data on female STEM graduates is unavailable, but the gig economy prevalence is 40.99%. The country has 228 developers per million population and 2 higher learning institutions teaching AI/Machine Learning. Côte d'Ivoire has low internet usage with 38% of the population online, and 70.4%

have electricity access. Its GSMA Mobile Connectivity Index ranking is 50.09, with a Data Governance score of 31. The trust level in digital technologies is 33.57, and 79.87% of the population has 3G mobile network coverage. Computer software spending is very low at 1.11. Côte d'Ivoire has not released a National AI Strategy but has established data protection legislation. The country impresses with high scores in investment promotion (51.06) and regulatory quality (48.58), though its government effectiveness is more moderate (37.26). With a "Medium" GovTech Maturity Index, Côte d'Ivoire demonstrates strong potential in creating an enabling environment for technological advancement despite the absence of a formal AI strategy.

22. Benin

Overall Rank: 22 | Overall Score: 34.9

Pillar Performance:

- **Digital Skills:** Rank 27 (10.2)
- **Data & Infrastructure:** Rank 18 (20.75)
- **Government Readiness:** Rank 12 (37.2)

Benin ranks 22nd overall, with its strongest performance in Government Readiness (rank 12, score 37.2), reflecting effective policy frameworks and regulatory environments for technology adoption. The country shows moderate capability in Data & Infrastructure (rank 18, score 20.75) and weaker performance in Digital Skills (rank 27, score 10.2). Benin reports an adult literacy rate of 42.3%. Data on the labor force with advanced education is unavailable, but ICT skills in education are at 50.76%. A significant 54.9% of STEM graduates are female, and the gig economy prevalence is 43.60%. Information on developers per million population is not available, but the country has 1 institution of higher learning teaching AI/Machine Learning. The country has a lower internet usage with 34% of the population online, and 56.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is 39.08, with a Data Governance score of 18. The trust level in digital technologies is 31.17, and 29.11% of the population has 3G mobile network coverage. Computer software spending is at 4.17. Benin has released its National AI Strategy and established data protection legislation, showing proactive planning for digital transformation. Though data on investment promotion is unavailable, Benin demonstrates moderate regulatory quality (40.57) and government effectiveness (42.45). Its "Medium" GovTech Maturity Index indicates ongoing development of digital governance capabilities, positioning Benin as an

emerging player in regional technology readiness. Benin's profile suggests that governance excellence has created policy foundations for AI advancement, but human capital development requires targeted attention. The country demonstrates how smaller economies can leverage policy innovations to build foundations for AI talent ecosystems.

23. Malawi

Overall Rank: 23 | Overall Score: 31.7

Pillar Performance:

- **Digital Skills:** Rank 26 (10.55)
- **Data & Infrastructure:** Rank 24 (17.55)
- **Government Readiness:** Rank 18 (30.9)

Malawi ranks 23rd overall, with its strongest performance in Government Readiness (rank 18, score 30.9) and relatively consistent capabilities across Digital Skills (rank 26, score 10.55) and Data & Infrastructure (rank 24, score 17.55). Malawi reports an adult literacy rate of 62.1%, with 77.9% of its labor force having advanced education. ICT skills in education are at 55.26%. Data on female STEM graduates is unavailable, and the gig economy prevalence is very low at 3.49%. Information on developers per million population is unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. The country has very low internet usage with only 18% of the population online, and a very low 14.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 36.89, with a Data Governance score of 32. The trust level in digital technologies is low at 22.33, and 24.52% of the population has 3G mobile network coverage. Computer software spending is at 3.28. Malawi is developing its National AI Strategy but only has draft data protection legislation. The country performs relatively well in investment promotion (39.04) despite low regulatory quality (22.17) and poor government effectiveness (19.81). Malawi's "Medium" GovTech Maturity Index suggests ongoing development of digital governance capabilities, though significant implementation challenges remain. This balanced profile suggests a holistic but developing approach to AI talent readiness. Malawi demonstrates moderate capability across all dimensions while facing significant resource constraints, indicating resilience in building AI foundations despite broader economic challenges.

24. Eswatini

Overall Rank: 24 | Overall Score: 30.95

Pillar Performance:

- **Digital Skills:** Rank 21 (12.3)
- **Data & Infrastructure:** Rank 19 (20.5)
- **Government Readiness:** Rank 36 (15.45)

Eswatini (formerly Swaziland) ranks 24th overall, with contrasting strengths and weaknesses across pillars. The country demonstrates relatively strong performance in Data & Infrastructure (rank 19, score 20.5) and Digital Skills (rank 21, score 12.3), but significantly weaker capability in Government Readiness (rank 36, score 15.45). Eswatini has a high adult literacy rate of 88.4%, with 82.6% of its labor force having advanced education. Data on ICT skills in education is unavailable, and a very low 0% of STEM graduates are female. Data on the prevalence of the gig economy and developers per million population is unavailable. The country has 1 higher learning institution teaching AI/Machine Learning. The country has moderate internet usage with 58% of the population online, and 82.3% have electricity access. Its GSMA Mobile Connectivity Index ranking is 51.45, with a Data Governance score of 45. Data on trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Eswatini has not released a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, low regulatory quality (24.06), and poor government effectiveness (19.34), Eswatini faces significant challenges in technological readiness. Its "Medium" GovTech Maturity Index suggests some focus on digital governance initiatives despite implementation challenges. Eswatini's profile suggests that while technical and infrastructure foundations have received investment, governance frameworks and policy approaches to AI advancement require substantial attention. This indicates how infrastructure and skills development can progress even while policy frameworks continue to evolve.

25. Angola

Overall Rank: 25 | Overall Score: 30.1

Pillar Performance:

- **Digital Skills:** Rank 24 (11.05)
- **Data & Infrastructure:** Rank 28 (16.6)
- **Government Readiness:** Rank 22 (28.65)

Angola ranks 25th overall, with its strongest performance in Government Readiness (rank 22, score 28.65) and relatively consistent capabilities across Digital Skills (rank 24, score 11.05) and Data & Infrastructure (rank 28, score 16.6). This balanced profile suggests a holistic but developing approach to AI talent readiness. Angola's post-conflict recovery has included attention to digital transformation, though significant challenges remain across all dimensions of AI readiness. The country's oil wealth presents opportunities for accelerated investment in digital skills and infrastructure if strategically directed. Angola's adult literacy rate is 66%. Data on the labor force with advanced education is unavailable, but ICT skills in education are low at 8.75%. A significant 38.4% of STEM graduates are female, and the gig economy prevalence is very low at 5.23%. Information on developers per million population is unavailable, but the country has 4 higher learning institutions teaching AI/Machine Learning. Angola has 39% of its population using the internet, and 48.5% with electricity access. Its GSMA Mobile Connectivity Index ranking is 44.05, with a Data Governance score of 14. The trust level in digital technologies is low at 18.35, and 26.22% of the population has 3G mobile network coverage. Computer software spending is at 12.01. Angola is developing its National AI Strategy and has established data protection legislation. The country performs extremely poorly in investment promotion (4.56) with low regulatory quality (22.64) and very poor government effectiveness (14.62). Angola's "Medium" GovTech Maturity Index suggests some focus on digital governance despite significant challenges in creating an enabling environment for technological advancement.

26. Ethiopia

Overall Rank: 26 | Overall Score: 28.35

Pillar Performance:

- **Digital Skills:** Rank 33 (8.05)
- **Data & Infrastructure:** Rank 22 (18.05)
- **Government Readiness:** Rank 23 (28.0)

Ethiopia ranks 26th overall, with relatively balanced performance in Data & Infrastructure (rank 22, score 18.05) and Government Readiness (rank 23, score 28.0), but weaker capability in Digital Skills (rank 33, score 8.05). As one of Africa's fastest-growing economies and second-most populous nation, Ethiopia's mid-tier ranking suggests both challenges and opportunities. Ethiopia's adult literacy rate is 51.7%. Data on the labor force with advanced education and ICT skills in education is unavailable. Similarly, there is no data on

female STEM graduates, but the gig economy prevalence is 27.91%. The country has 72 developers per million population and 15 higher learning institutions teaching AI/Machine Learning. Ethiopia has a low internet usage with only 19% of the population online, and 55.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 36.36, but data on Data Governance is unavailable. The trust level in digital technologies is low at 12.29, and a high 84.07% of the population has 3G mobile network coverage. Computer software spending is very low at 0.00. Ethiopia has released its National AI Strategy but only has draft data protection legislation. With unavailable investment promotion data, very low regulatory quality (14.15), and poor government effectiveness (24.06), Ethiopia faces significant challenges in creating an enabling environment for technological advancement despite strategic commitment. Its "Medium" GovTech Maturity Index suggests ongoing development of digital governance capabilities. Recent economic reforms and infrastructure investments provide foundations for AI advancement, though human capital development requires targeted attention. Ethiopia's growing technology parks and digital initiatives signal potential for improved future performance.

27. Lesotho

Overall Rank: 27 | Overall Score: 28.3

Pillar Performance:

- **Digital Skills:** Rank 28 (9.25)
- **Data & Infrastructure:** Rank 25 (17.1)
- **Government Readiness:** Rank 27 (24.5)

Lesotho ranks 27th overall, with remarkably consistent performance across all three pillars: Digital Skills (rank 28, score 9.25), Data & Infrastructure (rank 25, score 17.1), and Government Readiness (rank 27, score 24.5). Lesotho has an adult literacy rate of 76.6%. Data on the labor force with advanced education is unavailable, but ICT skills in education are low at 22.35%. A lower 24.8% of STEM graduates are female, and the gig economy prevalence is 33.43%. Information on developers per million population is unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. The country has moderate internet usage with 47% of the population online, and 50.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 47.29, but data on Data Governance is unavailable. The trust level in digital technologies is low at 22.84, and 60.49% of the population has 3G mobile network coverage. Computer software spending is at 8.56. This

balanced profile suggests a holistic but developing approach to AI talent readiness, with similar levels of capability across technical, infrastructure, and policy dimensions. Lesotho has not released a National AI Strategy but has established data protection legislation. The country scores modestly in investment promotion (23.49) and regulatory quality (29.72), though its government effectiveness is very low (16.51). Lesotho's "Medium" GovTech Maturity Index indicates some focus on digital governance despite significant implementation challenges. As a small, landlocked country, Lesotho faces significant resource constraints but demonstrates resilience in building AI foundations despite these challenges.

28. Madagascar

Overall Rank: 28 | Overall Score: 25.7

Pillar Performance:

- **Digital Skills:** Rank 19 (12.6)
- **Data & Infrastructure:** Rank 37 (13.25)
- **Government Readiness:** Rank 35 (15.6)

Madagascar ranks 28th overall, with notable strength in Digital Skills (rank 19, score 12.6) compared to its weaker performance in Data & Infrastructure (rank 37, score 13.25) and Government Readiness (rank 35, score 15.6). Madagascar has an adult literacy rate of 74.8%, with 69.2% of its labor force having advanced education. Data on ICT skills in education is unavailable, and 31% of STEM graduates are female. The gig economy prevalence is 44.19%, but information on developers per million population is unavailable, and the country has 2 higher learning institutions teaching AI/Machine Learning. The country has very low internet usage with only 21% of the population online, and 36.1% have electricity access. Its GSMA Mobile Connectivity Index ranking is 34.91, but data on Data Governance is unavailable. The trust level in digital technologies is low at 17.36, and a very low 1.12% of the population has 3G mobile network coverage. Computer software spending is at 2.02. Madagascar has not released a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, low regulatory quality (21.23), and very poor government effectiveness (13.68), Madagascar faces significant challenges in creating an enabling environment for technological advancement. Its "Medium" GovTech Maturity Index suggests some focus on digital governance initiatives despite severe implementation challenges. This profile suggests significant investments in

technical education and human capital development that have outpaced infrastructure and governance capabilities. Madagascar's relatively strong Digital Skills performance despite broader challenges indicates resilience in maintaining educational pathways despite infrastructure limitations.

29. Mali

Overall Rank: 29 | Overall Score: 24.9

Pillar Performance:

- **Digital Skills:** Rank 29 (9.25)
- **Data & Infrastructure:** Rank 35 (13.45)
- **Government Readiness:** Rank 25 (25.7)

Mali ranks 29th overall, with its strongest performance in Government Readiness (rank 25, score 25.7) and relatively consistent capabilities across Digital Skills (rank 29, score 9.25) and Data & Infrastructure (rank 35, score 13.45). Mali has a very low adult literacy rate of 35.5%, with 81.7% of its labor force having advanced education. ICT skills in education are at 58.90%. Data on female STEM graduates is unavailable, and the gig economy prevalence is 31.10%. Information on developers per million population is unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. The country has low internet usage with 33% of the population online, and 53.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 34.52, but data on Data Governance is unavailable. The trust level in digital technologies is low at 15.51, and a very low 1.54% of the population has 3G mobile network coverage. Computer software spending is at 1.61. Mali has not released a National AI Strategy but has established data protection legislation. The country performs surprisingly well in investment promotion (44.07) despite lower scores in regulatory quality (25.94) and very poor government effectiveness (12.74). Mali's "Medium" GovTech Maturity Index indicates some focus on government technology initiatives, creating a mixed picture of technological readiness. Despite significant security challenges and political instability, Mali demonstrates resilience in maintaining governance frameworks for technology advancement. The country's profile suggests policy foundations for AI advancement exist despite infrastructure and human capital limitations.

30. Mozambique

Overall Rank: 30 | Overall Score: 24.75

Pillar Performance:

- **Digital Skills:** Rank 25 (10.8)
- **Data & Infrastructure:** Rank 30 (16.0)
- **Government Readiness:** Rank 39 (13.6)

Mozambique ranks 30th overall, with its strongest performance in Digital Skills (rank 25, score 10.8) and Data & Infrastructure (rank 30, score 16.0), but significantly weaker capability in Government Readiness (rank 39, score 13.6). The country reports an adult literacy rate of 60.7%, with 76.3% of its labor force having advanced education. Data on ICT skills in education is unavailable, and 29.3% of STEM graduates are female. The gig economy prevalence is very low at 5.52%. Information on developers per million population is unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. Mozambique has very low internet usage with only 21% of the population online, and 33.2% have electricity access. Its GSMA Mobile Connectivity Index ranking is 39.33, with a Data Governance score of 12. The trust level in digital technologies is low at 22.10, and 14.91% of the population has 3G mobile network coverage. Computer software spending is at 1.80. This profile suggests that while technical and infrastructure foundations have received some investment, governance frameworks and policy approaches to AI advancement require substantial attention. Mozambique's recent natural resource discoveries present opportunities for increased investment in digital transformation if governance capabilities can be strengthened. Mozambique has not released a National AI Strategy, and data on data protection legislation and investment promotion is unavailable. With low regulatory quality (24.53) and government effectiveness (25.94), Mozambique faces considerable challenges in technological readiness. Its "Medium" GovTech Maturity Index suggests some focus on digital governance initiatives despite implementation challenges.

31. Togo

Overall Rank: 31 | Overall Score: 22.05

Pillar Performance:

- **Digital Skills:** Rank 36 (7.7)
- **Data & Infrastructure:** Rank 33 (14.45)
- **Government Readiness:** Rank 28 (21.5)

Togo ranks 31st overall, with its strongest performance in Government Readiness (rank 28, score 21.5) compared to weaker capabilities in Data & Infrastructure (rank 33, score 14.45) and Digital Skills (rank 36, score 7.7). This profile suggests that governance frameworks have received more attention than infrastructure and human capital development. Togo's adult literacy rate is 63.7%, with 78.3% of its labor force having advanced education. Data on ICT skills in education, female STEM graduates, the prevalence of the gig economy, and developers per million population is unavailable. The country has no data on higher learning institutions teaching AI/Machine Learning in this table. Togo has low internet usage with 38% of the population online, and 57.2% have electricity access. Its GSMA Mobile Connectivity Index ranking is 41.63, with a Data Governance score of 13. Data on trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Togo has not released a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, moderate regulatory quality (33.96), and government effectiveness (30.19), Togo demonstrates reasonable foundational governance capabilities. Its "Medium" GovTech Maturity Index suggests ongoing development of digital governance initiatives. Togo's relatively strong policy performance indicates potential for accelerated AI advancement if similar focus can be directed to skills and infrastructure development.

32. Gabon

Overall Rank: 32 | Overall Score: 21.8

Pillar Performance:

- **Digital Skills:** Rank 37 (7.5)
- **Data & Infrastructure:** Rank 29 (16.45)
- **Government Readiness:** Rank 33 (17.0)

Gabon ranks 32nd overall, with its strongest performance in Data & Infrastructure (rank 29, score 16.45) and relatively consistent capabilities in Government Readiness (rank 33, score 17.0) and Digital Skills (rank 37, score 7.5). Despite its oil wealth and relatively high GDP per capita, Gabon's mid-tier ranking indicates that resource wealth has not yet translated into technological readiness. Gabon has a high adult literacy rate of 84.7%. Data on the labor force with advanced education and ICT skills in education is unavailable. Similarly, there is no data on female STEM graduates or the prevalence of the gig economy. Information on developers per million population is also unavailable, but the country has 2 higher learning

institutions teaching AI/Machine Learning. Gabon has high internet usage with 74% of the population online, and 93.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is 53.28, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. The country has not released a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, moderate regulatory quality (25.00), and low government effectiveness (23.11), Gabon faces considerable challenges in technological readiness. Its "Low" GovTech Maturity Index indicates minimal focus on digital governance initiatives. The country's profile suggests opportunities for accelerated investment in digital skills if resource revenues can be strategically directed toward human capital development.

33. Sudan

Overall Rank: 33 | Overall Score: 20.85

Pillar Performance:

- **Digital Skills:** Rank 22 (12.05)
- **Data & Infrastructure:** Rank 36 (13.3)
- **Government Readiness:** Rank 51 (4.5)

Sudan ranks 33rd overall, with a stark contrast between relatively strong Digital Skills capability (rank 22, score 12.05) and extremely weak Government Readiness (rank 51, score 4.5). The country also shows moderate performance in Data & Infrastructure (rank 36, score 13.3). Sudan reports an adult literacy rate of 60.7%. Data on the labor force with advanced education and ICT skills in education is unavailable. A significant 47.2% of STEM graduates are female, and data on the prevalence of the gig economy and developers per million population is unavailable. The country has 8 higher learning institutions teaching AI/Machine Learning. Sudan has low internet usage with 29% of the population online, and 63.2% have electricity access. Its GSMA Mobile Connectivity Index ranking is 29.29, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Sudan has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, extremely low regulatory quality (4.72), and very poor government effectiveness (2.36), Sudan faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance initiatives. Sudan's profile reflects the impact of political instability and international isolation on

governance frameworks, despite maintaining some educational capacity. The significant governance deficit represents the primary barrier to AI talent ecosystem development, despite some human capital foundations.

34. Burundi

Overall Rank: 34 | Overall Score: 20.35

Pillar Performance:

- **Digital Skills:** Rank 18 (13.1)
- **Data & Infrastructure:** Rank 47 (10.1)
- **Government Readiness:** Rank 44 (10.0)

Burundi ranks 34th overall, with exceptional strength in Digital Skills (rank 18, score 13.1) compared to significantly weaker performance in Data & Infrastructure (rank 47, score 10.1) and Government Readiness (rank 44, score 10.0). This unusual profile suggests resilience in maintaining educational pathways despite substantial infrastructure limitations and governance challenges. Burundi's adult literacy rate is 68.4%, with 76.1% of its labor force having advanced education. Data on ICT skills in education is unavailable, and a lower 18.2% of STEM graduates are female. The gig economy prevalence is 30.81%, and information on developers per million population is unavailable, but the country has 7 higher learning institutions teaching AI/Machine Learning. Burundi has very low internet usage with only 11% of the population online, and a very low 10.3% have electricity access. Its GSMA Mobile Connectivity Index ranking is 24.8, but data on Data Governance is unavailable. The trust level in digital technologies is very low at 9.25, and a very low 0.06% of the population has 3G mobile network coverage. Computer software spending is at 6.14. The country has not released a National AI Strategy and only has draft data protection legislation. With unavailable investment promotion data, very low regulatory quality (15.57), and extremely poor government effectiveness (11.32), Burundi faces severe challenges in all aspects of government readiness. Its "Medium" GovTech Maturity Index suggests some focus on digital governance despite significant implementation challenges. As one of the world's poorest countries, Burundi's relatively strong Digital Skills performance demonstrates how human capital development can progress even in resource-constrained environments.

35. Burkina Faso

Overall Rank: 35 | Overall Score: 20.1

Pillar Performance:

- **Digital Skills:** Rank 42 (6.65)
- **Data & Infrastructure:** Rank 31 (15.3)
- **Government Readiness:** Rank 29 (19.65)

Burkina Faso ranks 35th overall, with its strongest performance in Government Readiness (rank 29, score 19.65) and Data & Infrastructure (rank 31, score 15.3), but significantly weaker capability in Digital Skills (rank 42, score 6.65). Despite security challenges and political transitions, Burkina Faso demonstrates resilience in maintaining governance frameworks and infrastructure investments. The country's profile suggests policy and infrastructure foundations for AI advancement exist despite human capital limitations. Burkina Faso has a low adult literacy rate of 41.2%, with 58.2% of its labor force having advanced education. Data on ICT skills in education is unavailable, and a lower 20.6% of STEM graduates are female. The gig economy prevalence is 15.99%, and information on developers per million population is unavailable, but the country has 5 higher learning institutions teaching AI/Machine Learning. Burkina Faso has very low internet usage with only 20% of the population online, and a very low 19.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is 31.24, with a Data Governance score of 39. The trust level in digital technologies is low at 21.81, and a very low 0.17% of the population has 3G mobile network coverage. Computer software spending is at 2.19. The country lacks a National AI Strategy but has established data protection legislation. With unavailable data on investment promotion, a moderate regulatory quality score (34.91), and low government effectiveness (21.23), Burkina Faso faces considerable challenges in technological readiness. Its "Medium" GovTech Maturity Index suggests some focus on government technology, though implementation challenges persist.

36. Mauritania

Overall Rank: 36 | Overall Score: 18.45

Pillar Performance:

- **Digital Skills:** Rank 35 (7.9)
- **Data & Infrastructure:** Rank 38 (13.05)
- **Government Readiness:** Rank 37 (15.3)

Mauritania ranks 36th overall, with remarkably consistent performance across all three pillars: Digital Skills (rank 35, score 7.9), Data & Infrastructure (rank 38, score 13.05), and Government Readiness (rank 37, score 15.3). Mauritania's adult literacy rate is 53.5%, with 75.8% of its labor force having advanced education. Data on ICT skills in education is unavailable, and 28.9% of STEM graduates are female. Data on the prevalence of the gig economy and developers per million population is unavailable. The country has 1 higher learning institution teaching AI/Machine Learning. The country has moderate internet usage with 44% of the population online, and 49.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 37.5, but data on Data Governance is unavailable. The trust level in digital technologies is low at 17.25, and a very low 0.00% of the population has 3G mobile network coverage. Computer software spending is at 29.53. Mauritania demonstrates significant challenges in government readiness for AI adoption. The country has not released a National AI Strategy but has established data protection legislation. With unavailable data on government promotion of investment in emerging technologies, Mauritania scores very low in regulatory quality (15.09) and shows minimal government effectiveness (24.53). The country's "Low" GovTech Maturity Index (Category D) confirms minimal focus on digital governance initiatives. This combination of missing strategic planning, limited regulatory capacity, and weak institutional effectiveness places Mauritania among the least prepared nations in West Africa for technological transformation. The lack of investment promotion data coupled with low governance scores suggests fundamental challenges in creating an enabling environment for emerging technologies despite having basic data protection frameworks in place. Nevertheless, the balanced profile across the three pillars suggests a holistic but developing approach to AI talent readiness, with similar levels of capability across technical, infrastructure, and policy dimensions. Mauritania's consistent mid-tier performance across all pillars indicates opportunities for balanced improvement through coordinated investments.

37. Comoros

Overall Rank: 37 | Overall Score: 18.35

Pillar Performance:

- **Digital Skills:** Rank 38 (7.45)
- **Data & Infrastructure:** Rank 27 (16.7)
- **Government Readiness:** Rank 48 (6.55)

Comoros ranks 37th overall, with notable strength in Data & Infrastructure (rank 27, score 16.7) compared to moderate Digital Skills capability (rank 38, score 7.45) and weak Government Readiness (rank 48, score 6.55). As a small island nation, Comoros demonstrates relatively strong infrastructure development that has outpaced governance frameworks. Comoros has an adult literacy rate of 58.8%, with 81.2% of its labor force having advanced education. Data on ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. Comoros has low internet usage with 27% of the population online, and 89.9% have electricity access. Its GSMA Mobile Connectivity Index ranking is 31.29, but data on Data Governance and trust in digital technologies is unavailable. Data on 3G mobile network coverage and computer software spending is also unavailable. The country's profile suggests that while connectivity foundations exist, policy and human capital development require significant attention to build viable AI talent ecosystems. The country has not released a National AI Strategy, and data on data protection legislation and investment promotion is unavailable. With very low regulatory quality (10.85) and extremely poor government effectiveness (6.60), Comoros faces severe challenges in creating an enabling environment for technological advancement. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance.

38. Gambia

Overall Rank: 38 | Overall Score: 17.2

Pillar Performance:

- **Digital Skills:** Rank 46 (4.75)
- **Data & Infrastructure:** Rank 34 (14.4)
- **Government Readiness:** Rank 30 (19.05)

Gambia ranks 38th overall, with a stark contrast between strong Government Readiness (rank 30, score 19.05) and weak Digital Skills capability (rank 46, score 4.75). The country also shows moderate performance in Data & Infrastructure (rank 34, score 14.4). The coutry's adult literacy rate is 50.8%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 3 higher learning institutions teaching AI/Machine Learning. The country has

moderate internet usage with 54% of the population online, and 65.4% have electricity access. Its GSMA Mobile Connectivity Index ranking is 36.25, with a Data Governance score of 26. Data on trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Gambia lacks a National AI Strategy but has data protection legislation in place. With unavailable investment promotion data, low regulatory quality (28.30), and moderate government effectiveness (29.72), Gambia faces substantial challenges in technological readiness. Its "Low" GovTech Maturity Index indicates minimal focus on government technology initiatives, highlighting the need for comprehensive digital governance reforms. This profile suggests that recent democratic transitions have positively impacted governance frameworks, though human capital development significantly lags. Gambia's relatively strong policy performance indicates potential for AI advancement if similar focus can be directed to skills development.

39. Sierra Leone

Overall Rank: 39 | Overall Score: 15.25

Pillar Performance:

- **Digital Skills:** Rank 44 (6.35)
- **Data & Infrastructure:** Rank 39 (13.05)
- **Government Readiness:** Rank 34 (15.95)

Sierra Leone ranks 39th overall, with its strongest performance in Government Readiness (rank 34, score 15.95) and consistent performance in Data & Infrastructure (rank 39, score 13.05) and Digital Skills (rank 44, score 6.35). Despite post-conflict recovery challenges, Sierra Leone demonstrates resilience in rebuilding governance frameworks. Sierra Leone reports a low adult literacy rate of 43.2%, with 69.9% of its labor force having advanced education. Data on ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 4 higher learning institutions teaching AI/Machine Learning. The country has low internet usage with 30% of the population online, and 29.4% have electricity access. Its GSMA Mobile Connectivity Index ranking is 38.88, but data on Data Governance is unavailable. The trust level in digital technologies is low at 13.53, and 51.99% of the population has 3G mobile network coverage. Data on computer software spending is unavailable. Sierra Leone has not released a National AI Strategy and lacks data protection legislation. The country performs poorly across all indicators: investment

promotion (7.31), regulatory quality (13.63), and government effectiveness (12.26). Despite a "Medium" GovTech Maturity Index, Sierra Leone faces substantial challenges in creating an enabling environment for technological advancement. The country's profile suggests policy foundations for AI advancement are developing faster than technical capabilities, indicating opportunities for targeted skills investments to complement governance strengths.

40. Chad

Overall Rank: 40 | Overall Score: 14.2

Pillar Performance:

- **Digital Skills:** Rank 45 (4.85)
- **Data & Infrastructure:** Rank 43 (11.2)
- **Government Readiness:** Rank 31 (18.7)

Chad ranks 40th overall, with a stark contrast between relatively strong Government Readiness (rank 31, score 18.7) and weak capabilities in Digital Skills (rank 45, score 4.85) and Data & Infrastructure (rank 43, score 11.2). Despite significant security challenges and development constraints, Chad demonstrates resilience in maintaining governance frameworks for technology advancement. Chad reports a very low adult literacy rate of 22.3%. Data on the labor force with advanced education is unavailable, but ICT skills in education are at 53.24%. There is no data on female STEM graduates, and the gig economy prevalence is low at 10.76%. Information on developers per million population is unavailable, but the country has 3 higher learning institutions teaching AI/Machine Learning. It has very low internet usage with only 12% of the population online, and a very low 11.7% have electricity access. Its GSMA Mobile Connectivity Index ranking is 24.73, but data on Data Governance is unavailable. The trust level in digital technologies is low at 14.67, and 54.46% of the population has 3G mobile network coverage. Data on computer software spending is unavailable. Central African Republic has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, extremely low regulatory quality (6.13), and very poor government effectiveness (4.25), the Central African Republic faces severe challenges in creating an enabling environment for technological advancement. Its "Low" GovTech Maturity Index confirms minimal focus on digital governance. The country's relatively strong policy

performance indicates potential for AI advancement if similar focus can be directed to skills and infrastructure development.

41. Sao Tome and Principe

Overall Rank: 41 | Overall Score: 14.1

Pillar Performance:

- **Digital Skills:** Rank 40 (7.3)
- **Data & Infrastructure:** Rank 44 (11.1)
- **Government Readiness:** Rank 38 (14.35)

Sao Tome and Principe ranks 41st overall, with relatively consistent performance across all three pillars: Digital Skills (rank 40, score 7.3), Data & Infrastructure (rank 44, score 11.1), and Government Readiness (rank 38, score 14.35). Sao Tome and Principe has a high adult literacy rate of 92.8%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. The country has moderate internet usage with 57% of the population online, and 78.0% have electricity access. Data on its GSMA Mobile Connectivity Index ranking, Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Sao Tome and Principe has not released a National AI Strategy, and data on data protection legislation and investment promotion is unavailable. The country demonstrates low regulatory quality (16.51) and government effectiveness (17.98). Its "Low" GovTech Maturity Index indicates minimal focus on digital governance initiatives, reflecting significant challenges in creating an enabling environment for technological advancement. The lack of strategic planning and infrastructure development highlights the need for comprehensive reforms to improve government readiness for AI adoption. As a small island nation, Sao Tome and Principe faces significant scale limitations but demonstrates a balanced approach to capability development. The country's consistent lower-tier performance across all pillars indicates opportunities for holistic improvement through coordinated investments.

42. Equatorial Guinea

Overall Rank: 42 | Overall Score: 13.95

Pillar Performance:

- **Digital Skills:** Rank 39 (7.45)
- **Data & Infrastructure:** Rank 42 (11.35)
- **Government Readiness:** Rank 43 (10.25)

Equatorial Guinea ranks 42nd overall, with remarkably consistent performance across all three pillars: Digital Skills (rank 39, score 7.45), Data & Infrastructure (rank 42, score 11.35), and Government Readiness (rank 43, score 10.25). The country has a very high adult literacy rate of 94.4%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. Equatorial Guinea has high internet usage with 67% of the population online, and 67.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 35.99, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. The country has not released a National AI Strategy, and data on data protection legislation and investment promotion is unavailable. With extremely low regulatory quality (5.66) and very poor government effectiveness (9.91), Equatorial Guinea faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance initiatives. Despite significant oil wealth and high GDP per capita, Equatorial Guinea's low ranking indicates that resource abundance has not translated into AI readiness. The country's profile suggests opportunities for dramatic improvement if resource revenues can be strategically directed toward digital transformation.

43. Democratic Republic of Congo (DRC)

Overall Rank: 43 | Overall Score: 13.55

Pillar Performance:

- **Digital Skills:** Rank 30 (8.8)
- **Data & Infrastructure:** Rank 52 (8.95)
- **Government Readiness:** Rank 45 (9.15)

The Democratic Republic of Congo ranks 43rd overall, with notable strength in Digital Skills (rank 30, score 8.8) compared to extremely weak performance in Data & Infrastructure

(rank 52, score 8.95) and Government Readiness (rank 45, score 9.15). Despite enormous natural resource wealth and Africa's second-largest land area, the DRC faces significant governance and infrastructure challenges. DRC reports an adult literacy rate of 77%. Data on the labor force with advanced education is unavailable, but ICT skills in education are low at 27.58%. A lower 25.1% of STEM graduates are female, and the gig economy prevalence is also low at 13.37%. Information on developers per million population is unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. The country has a low internet usage with 27% of the population online, and a very low 21.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is 24.85, but data on Data Governance is unavailable. The trust level in digital technologies is very low at 5.80, and a very low 0.09% of the population has 3G mobile network coverage. Data on computer software spending is unavailable. The country has not released a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, extremely low regulatory quality (8.02), and nearly zero government effectiveness (4.72), the DRC faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance amid broader governance issues. The relatively stronger Digital Skills performance suggests resilience in maintaining some educational pathways despite substantial systemic constraints.

44. Liberia

Overall Rank: 44 | Overall Score: 13.1

Pillar Performance:

- **Digital Skills:** Rank 34 (7.9)
- **Data & Infrastructure:** Rank 48 (10.0)
- **Government Readiness:** Rank 46 (8.8)

Liberia ranks 44th overall, with its strongest performance in Digital Skills (rank 34, score 7.9) compared to weaker capabilities in Data & Infrastructure (rank 48, score 10.0) and Government Readiness (rank 46, score 8.8). Liberia's adult literacy rate is 48.3%, with a high 92.7% of its labor force having advanced education. Data on ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. The country has low internet usage with 30% of

the population online, and 31.8% have electricity access. Its GSMA Mobile Connectivity Index ranking is 34.97, with a very low Data Governance score of 0. Data on trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Liberia lacks both a National AI Strategy and data protection legislation. With unavailable investment promotion data, low regulatory quality (18.40), and very poor government effectiveness (8.96), Liberia faces significant challenges in creating an enabling environment for technological advancement. Its "Low" GovTech Maturity Index highlights the need for fundamental digital governance reforms. Despite post-conflict reconstruction challenges, Liberia demonstrates resilience in maintaining some educational pathways. The country's profile suggests human capital development has marginally outpaced infrastructure and governance frameworks, though all dimensions require significant enhancement.

45. Republic of the Congo (Brazzaville)

Overall Rank: 45 | Overall Score: 12.0

Pillar Performance:

- **Digital Skills:** Rank 41 (6.85)
- **Data & Infrastructure:** Rank 46 (10.3)
- **Government Readiness:** Rank 42 (11.6)

The Republic of the Congo ranks 45th overall, with relatively consistent performance across all three pillars: Government Readiness (rank 42, score 11.6), Data & Infrastructure (rank 46, score 10.3), and Digital Skills (rank 41, score 6.85). Despite significant oil wealth, the Republic of Congo's low ranking indicates that resource abundance has not translated into AI readiness. The country has shows an adult literacy rate of 80.3%. Data on the labor force with advanced education and ICT skills in education is unavailable. A lower 20.8% of STEM graduates are female, and data on the prevalence of the gig economy and developers per million population is unavailable. The country has 1 higher learning institution teaching AI/Machine Learning. Republic of the Congo (Brazzaville) has low internet usage with 36% of the population online, and 50.6% have electricity access. Its GSMA Mobile Connectivity Index ranking is 34.43, but data on Data Governance and trust in digital technologies is unavailable. Data on 3G mobile network coverage and computer software spending is also unavailable. The country has not released a National AI Strategy, and data on data protection legislation is unavailable. The country performs very poorly in investment

promotion (11.00), regulatory quality (10.38), and government effectiveness (9.43). Its "Low" GovTech Maturity Index indicates minimal focus on digital governance, highlighting severe challenges in technological readiness. The country's consistent lower-tier performance across all pillars suggests systemic challenges in translating resource wealth into technological advancement.

46. Libya

Overall Rank: 46 | Overall Score: 11.3

Pillar Performance:

- **Digital Skills:** Rank 50 (3.5)
- **Data & Infrastructure:** Rank 32 (14.9)
- **Government Readiness:** Rank 50 (5.0)

Libya ranks 46th overall, with a striking contrast between relatively strong Data & Infrastructure capability (rank 32, score 14.9) and extremely weak performance in Digital Skills (rank 50, score 3.5) and Government Readiness (rank 50, score 5.0). Libya's data on adult literacy rate, labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 5 higher learning institutions teaching AI/Machine Learning. Libya has high internet usage with 88% of the population online, and 70.0% have electricity access. Its GSMA Mobile Connectivity Index ranking is 62.03, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable.Libya has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, extremely low regulatory quality (2.36), and very poor government effectiveness (5.91), Libya faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance amid ongoing political instability. This unusual profile reflects Libya's dramatic regression from previously developed capacities due to prolonged conflict and political instability. Infrastructure remnants from previous development persist despite the collapse of governance frameworks and educational systems, demonstrating how conflict can erode previously established capabilities.

47. Niger

Overall Rank: 47 | Overall Score: 10.65

Pillar Performance:

- **Digital Skills:** Rank 48 (4.1)
- **Data & Infrastructure:** Rank 49 (9.45)
- **Government Readiness:** Rank 32 (17.5)

Niger ranks 47th overall, with a stark contrast between relatively strong Government Readiness (rank 32, score 17.5) and weak capabilities in Digital Skills (rank 48, score 4.1) and Data & Infrastructure (rank 49, score 9.45). The country has a very low adult literacy rate of 35.1%, with 69.6% of its labor force having advanced education. Data on ICT skills in education is unavailable, and 18% of STEM graduates are female. Data on the prevalence of the gig economy and developers per million population is unavailable. The country has 2 higher learning institutions teaching AI/Machine Learning. Niger has very low internet usage with only 17% of the population online, and a very low 19.5% have electricity access. Its GSMA Mobile Connectivity Index ranking is 28.66, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Niger lacks a National AI Strategy but has established data protection legislation. With unavailable investment promotion data, low regulatory quality (20.75), and moderate government effectiveness (28.77), Niger faces significant challenges in technological readiness. Its "Low" GovTech Maturity Index indicates minimal focus on digital governance initiatives. Despite being one of the world's poorest countries with significant development challenges, Niger demonstrates resilience in maintaining governance frameworks for technology advancement. The country's profile suggests policy foundations for AI advancement exist despite substantial infrastructure and human capital limitations.

48. Eritrea

Overall Rank: 48 | Overall Score: 10.45

Pillar Performance:

- **Digital Skills:** Rank 43 (6.4)
- **Data & Infrastructure:** Rank 41 (11.55)
- **Government Readiness:** Rank 52 (4.1)

Eritrea ranks 48th overall, with moderate performance in Data & Infrastructure (rank 41, score 11.55) and Digital Skills (rank 43, score 6.4), but extremely weak Government Readiness (rank 52, score 4.1). The country reports an adult literacy rate of 76.6%. Data on the labor force with advanced education and ICT skills in education is unavailable. A lower 27.8% of STEM graduates are female, and data on the prevalence of the gig economy and developers per million population is unavailable. The country has 1 higher learning institution teaching AI/Machine Learning. Eritrea has low internet usage with 27% of the population online, and 55.4% have electricity access. Data on its GSMA Mobile Connectivity Index ranking, Data Governance, and trust in digital technologies is unavailable. Data on 3G mobile network coverage and computer software spending is also unavailable.Eritrea has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, nearly zero regulatory quality (0.47), and extremely poor government effectiveness (2.83), Eritrea faces the most severe challenges in government readiness across Africa. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance amid broader governance issues. Eritrea remains Africa's most isolated state, with a militarized authoritarian state that has not held a national election since independence from Ethiopia in 1993. This profile reflects the impact of political isolation and authoritarian governance on technology advancement despite maintaining some infrastructure and educational capacity. The significant governance deficit represents the primary barrier to AI talent ecosystem development in Eritrea.

49. Guinea

Overall Rank: 49 | Overall Score: 9.65

Pillar Performance:

- **Digital Skills:** Rank 49 (3.5)
- **Data & Infrastructure:** Rank 45 (10.4)
- **Government Readiness:** Rank 40 (13.05)

Guinea ranks 49th overall, with its strongest performance in Government Readiness (rank 40, score 13.05) compared to weaker capabilities in Data & Infrastructure (rank 45, score 10.4) and particularly Digital Skills (rank 49, score 3.5). Guinea has a very low adult literacy rate of 32%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 4 higher

learning institutions teaching AI/Machine Learning. The country has low internet usage with 34% of the population online, and 47.7% have electricity access. Its GSMA Mobile Connectivity Index ranking is 36.83, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Guinea has not released a National AI Strategy though it has established data protection legislation. With unavailable investment promotion data, very low regulatory quality (13.21), and poor government effectiveness (16.98), Guinea struggles with fundamental governance challenges that impede technological readiness. Its "Low" GovTech Maturity Index confirms minimal focus on digital governance. Despite significant mineral wealth, Guinea faces substantial challenges in translating resource advantages into human capital development. The country's profile suggests policy frameworks are more developed than technical and infrastructure capabilities, indicating opportunities for targeted skills investments.

50. Somalia

Overall Rank: 50 | Overall Score: 8.95

Pillar Performance:

- **Digital Skills:** Rank 47 (4.6)
- **Data & Infrastructure:** Rank 40 (11.75)
- **Government Readiness:** Rank 53 (2.35)

Somalia ranks 50th overall, with relatively stronger performance in Data & Infrastructure (rank 40, score 11.75) and moderate Digital Skills capability (rank 47, score 4.6), but extremely weak Government Readiness (rank 53, score 2.35). Somalia has low internet usage with 28% of the population online, and 48.9% have electricity access. Its GSMA Mobile Connectivity Index ranking is 34.56, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Somalia has not released a National AI Strategy, with unavailable data on data protection legislation and investment promotion. With extremely low regulatory quality (2.83) and nearly zero government effectiveness (1.86), Somalia faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal focus on digital governance amid ongoing political instability. Despite decades of state fragility and conflict, Somalia demonstrates resilience in maintaining some infrastructure and educational pathways. The country's mobile-first connectivity innovations provide

potential foundations for digital development, though governance deficits present significant barriers to systematic advancement.

51. Guinea-Bissau

Overall Rank: 51 | Overall Score: 5.35

Pillar Performance:

- **Digital Skills:** Rank 51 (3.0)
- **Data & Infrastructure:** Rank 50 (9.2)
- **Government Readiness:** Rank 47 (6.65)

Guinea-Bissau ranks 51st overall, with consistently weak performance across all pillars: Data & Infrastructure (rank 50, score 9.2), Government Readiness (rank 47, score 6.65), and Digital Skills (rank 51, score 3.0). Guinea-Bissau reports a low adult literacy rate of 45.6%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 2 higher learning institutions teaching AI/Machine Learning. Guinea-Bissau has low internet usage with 32% of the population online, and 37.4% have electricity access. Its GSMA Mobile Connectivity Index ranking is 32.11, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Guinea-Bissau has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, very low regulatory quality (9.91), and extremely poor government effectiveness (8.02), Guinea-Bissau faces severe challenges in all aspects of government readiness. Its "Low" GovTech Maturity Index reflects minimal attention to digital governance. The country faces significant challenges across all dimensions of AI talent readiness, reflecting broader development constraints and political instability. Guinea-Bissau's profile suggests comprehensive interventions are needed across all pillars to build viable foundations for AI talent development.

52. Djibouti

Overall Rank: 52 | Overall Score: 4.6

Pillar Performance:

- **Digital Skills:** Rank 54 (0.1)

- **Data & Infrastructure:** Rank 53 (8.7)
- **Government Readiness:** Rank 41 (12.65)

Djibouti ranks 52nd overall, with a stark contrast between relatively strong Government Readiness (rank 41, score 12.65) and extremely weak Digital Skills capability (rank 54, score 0.1). The country also shows weak performance in Data & Infrastructure (rank 53, score 8.7). Despite its strategic location and investments in port infrastructure, Djibouti faces significant challenges in human capital development. Djibouti's data on adult literacy rate, labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. Djibouti has high internet usage with 65% of the population online, and 65.0% have electricity access. Data on its GSMA Mobile Connectivity Index ranking, Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. Djibouti has not released a National AI Strategy and lacks data protection legislation. With unavailable investment promotion data, low regulatory quality (17.45), and moderate government effectiveness (25.47), Djibouti faces significant challenges in technological readiness. Its "Low" GovTech Maturity Index indicates minimal focus on digital governance initiatives. The country's profile suggests that while some policy frameworks exist, foundational skills development requires urgent attention.

53. Central African Republic

Overall Rank: 53 | Overall Score: 4.1

Pillar Performance:

- **Digital Skills:** Rank 52 (1.0)
- **Data & Infrastructure:** Rank 51 (9.1)
- **Government Readiness:** Rank 49 (5.2)

The Central African Republic ranks 53rd overall, with consistently weak performance across all pillars: Data & Infrastructure (rank 51, score 9.1), Government Readiness (rank 49, score 5.2), and particularly Digital Skills (rank 52, score 1.0). The country faces significant challenges across all dimensions of AI talent readiness, reflecting broader development constraints and ongoing conflict. The CAR's profile suggests comprehensive interventions

are needed across all pillars to build viable foundations for AI talent development, with human capital development representing the most critical gap.

54. South Sudan

Overall Rank: 54 | Overall Score: 1.4

Pillar Performance:

- **Digital Skills:** Rank 53 (0.55)
- **Data & Infrastructure:** Rank 54 (7.85)
- **Government Readiness:** Rank 54 (1.85)

South Sudan ranks 54th overall, with consistently weak performance across all pillars: Data & Infrastructure (rank 54, score 7.85), Digital Skills (rank 53, score 0.55), and Government Readiness (rank 54, score 1.85). As the world's newest country still grappling with conflict and state formation, South Sudan faces fundamental challenges across all dimensions of AI talent readiness. The country has a very low adult literacy rate of 34.5%. Data on the labor force with advanced education, ICT skills in education, female STEM graduates, and the prevalence of the gig economy is unavailable. Information on developers per million population is also unavailable, but the country has 1 higher learning institution teaching AI/Machine Learning. South Sudan has very low internet usage with only 12% of the population online, and a very low 8.4% have electricity access. Its GSMA Mobile Connectivity Index ranking is very low at 10.41, but data on Data Governance, trust in digital technologies, 3G mobile network coverage, and computer software spending is unavailable. The country has neither released a National AI Strategy nor established data protection legislation. With unavailable investment promotion data, extremely low regulatory quality (0.94), and nearly zero government effectiveness, South Sudan faces insurmountable challenges in creating an enabling environment for technological advancement. Its "Low" GovTech Maturity Index confirms minimal focus on digital governance amid broader governance failures. The country's profile suggests that basic stability and governance must be established before meaningful AI talent ecosystem development can begin, though mobile connectivity may offer initial pathways for digital inclusion.

5. Recommendations and Future Considerations

The AI Talent Readiness Index highlights regional disparities and opportunities across Africa's AI ecosystem, emphasizing the need for targeted interventions in Digital Skills, Data & Infrastructure, and Government Readiness. Each region demonstrates unique strengths and challenges that must be addressed to build a robust and inclusive AI talent pipeline across the continent.

North Africa, with its high secondary school completion rates and strong higher education workforce, has the potential to drive AI literacy at scale. However, the region struggles with gender disparities in STEM, with female STEM graduates averaging only 18%. To address this, launching STEM scholarships for women in Egypt and Tunisia can help close the gender gap. Additionally, partnerships with European tech firms should be established to create AI-focused internships for graduates, strengthening their exposure to industry applications. While North Africa boasts strong IT infrastructure, the lack of AI strategies in countries like Libya and Sudan hinders cohesive growth. A Maghreb AI policy task force should be created to align strategies across the region. Furthermore, expanding renewable energy-powered mobile towers in Algeria and Morocco will help bridge connectivity gaps in rural areas, enabling broader AI adoption.

West Africa demonstrates entrepreneurial dynamism, particularly in Nigeria, but suffers from low ICT skills and developer density. Scaling coding bootcamps in Ghana and Nigeria can rapidly boost ICT competencies, while incentivizing tech hubs in Lagos and Accra to train 10,000 developers by 2026 will expand AI expertise. Additionally, harmonizing AI regulations across ECOWAS, spearheaded by Ghana and Senegal, will create a more favorable environment for AI investment and deployment. However, electricity access remains a key challenge, with a regional average of only 55%. Deploying solar mini-grids to power data centers in Nigeria and Senegal will help ensure reliable infrastructure for AI-powered services. Moreover, cross-border data governance agreements within ECOWAS will enhance regulatory alignment and encourage responsible AI development. Leveraging the African Continental Free Trade Area (AfCFTA) to scale fintech AI solutions across borders will further stimulate AI-driven economic transformation in the region.

East Africa's mobile-first innovation landscape, exemplified by Kenya's strong connectivity, provides a foundation for AI adoption. However, the limited number of institutions teaching AI remains a constraint. Establishing AI and machine learning programs at five

universities in Kenya and Rwanda will build a sustainable talent pipeline, while integrating AI literacy into vocational training will extend these skills to informal workers. East Africa's policy innovation, led by Rwanda, offers a model for AI governance, but post-conflict governance voids in Somalia pose a challenge. Replicating Rwanda's regulatory sandboxes in Kenya and Uganda will encourage AI experimentation, while deploying AU peacekeeping units to protect digital infrastructure in Somalia can safeguard emerging AI initiatives. To strengthen AI's data backbone, Ethiopia's geothermal resources should be leveraged to build sustainable data centers, ensuring reliable electricity for AI applications. Additionally, scaling Rwanda's data governance framework to Tanzania and Uganda will standardize data protection and bolster public trust. Positioning Kenya and Rwanda as continental leaders in agritech and mobile AI will further capitalize on the region's existing strengths.

Southern Africa benefits from advanced higher education institutions, such as South Africa's Stellenbosch University, but faces gender disparities in STEM. To address this, mentorship programs for women in tech should be expanded, alongside partnerships with mining firms to sponsor AI scholarships in Zambia and Zimbabwe. While the region's regulatory frameworks are among the most advanced in Africa, slow policy implementation in Zimbabwe creates inefficiencies. Training policymakers in Botswana and Namibia on agile governance will improve AI policy execution, while the creation of a SADC AI investment fund will attract private capital to accelerate AI ecosystem growth. Given the region's reliable infrastructure but high software costs, negotiating bulk licensing deals for AI tools across SADC nations will make AI technologies more accessible. Moreover, developing open-source AI frameworks tailored to mining and healthcare will support industry-specific AI adoption. Establishing South Africa as Africa's AI research capital will ensure sustained innovation and competitiveness.

Central Africa's young population presents a demographic advantage for AI talent development, but a critical ICT skills deficit, especially in the Democratic Republic of Congo (DRC), limits progress. Deploying mobile-based digital literacy programs in Cameroon and DRC will help bridge this gap, while NGOs should play a pivotal role in rebuilding STEM education in post-conflict areas. The region's AI growth is further constrained by limited electricity access, with the DRC's access rate below 20%. Prioritizing hydropower projects to energize data infrastructure will be crucial for unlocking AI-driven solutions. Additionally, launching satellite internet partnerships in rural Cameroon and the Central African Republic (CAR) will enhance connectivity and facilitate AI adoption. The absence of data

laws in CAR further restricts AI development, highlighting the need for ECCAS member states to draft model data protection laws. Partnering with the AU to rebuild IT infrastructure in post-conflict zones will create a more stable environment for AI research and application. Given the region's vast natural resources, prioritizing electricity and connectivity to enable AI applications in resource management and conservation is critical.

With these targeted interventions in place, Africa can advance its AI readiness and cultivate a talent ecosystem that supports innovation, economic growth, and inclusive digital transformation. To achieve this, a unified, continent-wide AI education framework is essential, integrating AI literacy and computational thinking into curricula at all levels, from primary schools to vocational training centers. In Central and West Africa, where adult literacy and ICT skills lag behind other regions, this initiative must prioritize digital literacy as a fundamental competency, equipping young learners with the critical thinking and technical fluency necessary to engage with AI technologies. Meanwhile, North Africa's more advanced educational infrastructure can serve as a model for STEM curriculum development, while East Africa's mobile-first ecosystems offer opportunities to deliver AI awareness programs through accessible digital platforms. By harmonizing standards and fostering cross-border collaboration, this approach ensures that every African learner—whether in urban tech hubs or rural communities—gains exposure to AI's transformative potential.

To democratize AI knowledge, a continental AI awareness campaign must be launched, with the goal of training at least 15% of Africa's population—over 200 million people—by 2028. The implementation of this initiative must be adapted to regional contexts. In Southern Africa, where mining and healthcare sectors demonstrate strong AI adoption potential, training efforts should focus on industrial automation and public health applications. Fragile states such as South Sudan and Somalia require trauma-informed, mobile-delivered programs to rebuild trust in technology as part of post-conflict recovery efforts. Meanwhile, in West Africa, where informal economies play a significant role, AI literacy campaigns should leverage community networks and local languages to ensure that market traders, farmers, and artisans can effectively integrate AI tools into their livelihoods. These targeted efforts will not only demystify AI but also foster public engagement, creating a strong societal foundation for its ethical and inclusive adoption.

Africa's higher education system must evolve to produce world-class AI researchers and innovators. To achieve this, at least 30 universities should be designated as continental AI hubs, each specializing in applications relevant to their respective regions. North African institutions could lead in industrial AI and automation, leveraging their strong engineering programs. In East Africa, where agritech and fintech are thriving,key institutions should train PhD researchers to develop AI-driven solutions for optimized crop yields and mobile banking innovations. Southern Africa should expand its mining and healthcare AI research, capitalizing on the expertise of key institutions to address sector-specific challenges. Through interdisciplinary collaboration and industry partnerships, these hubs will cultivate 5,000 PhD researchers by 2030, equipping Africa with the expertise needed to both solve local challenges and contribute to global AI advancements.

Beyond academia, specialized training pathways must be developed to bridge the gap between theoretical knowledge and practical AI applications. By 2030, Africa must cultivate 1 million AI practitioners, including data scientists, machine learning engineers, and AI governance experts. Regional centers of excellence will drive this effort, tailoring programs to specific industry needs. In West Africa, creative AI academies in Nigeria and Ghana can train developers to build AI tools for the region's booming media and entertainment industries. Central Africa, with its vast natural resources, could focus on environmental AI, training practitioners to monitor deforestation and develop sustainable mining technologies. Meanwhile, East Africa's thriving tech hubs, such as those in Nairobi and Kigali, should scale coding bootcamps and apprenticeships, embedding AI skills into the region's entrepreneurial culture. These programs must emphasize ethical AI deployment, ensuring that practitioners champion transparency, fairness, and environmental sustainability in AI applications.

To unify these efforts and ensure coordinated execution, the establishment of an Africa AI Council is imperative. This pan-African body would oversee implementation, facilitate knowledge exchange, and advocate for equitable resource distribution across the continent. By aligning regional training initiatives with the AI Talent Readiness Index findings, the Council would prioritize interventions in regions that are lagging behind. It would also foster collaboration between established research hubs, such as those in North Africa, and emerging AI ecosystems elsewhere on the continent. Additionally, the Council would monitor progress toward continental AI education and workforce development targets, ensuring that no country is left behind in Africa's AI journey.

By investing in a robust AI talent ecosystem, Africa can harness its demographic dividend and emerging digital economy to build a future-ready workforce. These efforts will drive inclusive economic growth, safeguard African values, and position the continent as a global leader in ethical and responsible AI innovation. We believe that by taking bold, coordinated steps, Africa can shift from being a consumer of AI technologies to a key contributor in shaping the future of Artificial Intelligence.

Qhala

We are a team of problem solvers passionately driven to lead Africa's digital transformation and innovation. At Qhala we tie together strategy, research, design and technology. We create products, services and new business models that meet today's needs and future goals.

Our team of strategists, researchers, designers and engineers solve problems and create solutions that help organisations improve operational efficiency and deliver value to customers. We achieve this through a co-creative approach with the businesses, customers and other stakeholders.

Qubit Hub

Incubated by Qhala, Qubit Hub is an African-based AI research, innovation and development lab, a commune of African Researchers in Data Analysis, ML, Physics and Policy, whose goal is to ideate and incubate, conceptualise, design, develop and deploy AI Initiatives, while actively engaging with policymakers in creating relevant and practical regulatory.

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