

Job title	Data and Analytics Specialist
Reports to	<i>Associate Director of Impact</i>
Start Date	<i>ASAP</i>
Location	<i>Kigali, Rwanda</i>

About Carnegie Mellon University

Carnegie Mellon University Africa (CMU-Africa) is Carnegie Mellon University's global location in Africa, based in Kigali, Rwanda. Established in 2011, CMU-Africa is advancing engineering, technology, research, and innovation across the continent through world-class graduate education, applied research, and strategic partnerships.

With students from more than 25 African countries and a growing portfolio of sponsored programs, research initiatives, and talent development activities, CMU-Africa is helping develop the next generation of technology leaders while contributing to Africa's digital transformation.

The Opportunity

CMU-Africa is seeking an experienced and highly analytical Data and Analytics Specialist to strengthen the institution's data capabilities and support evidence-based decision-making across its educational, research, and sponsored programs.

This role will play a critical part in developing and maintaining the data systems, reporting infrastructure, analytics capabilities, and business intelligence tools that enable CMU-Africa and its partner institutions to effectively monitor performance, track outcomes, identify trends, and make informed decisions.

Working closely with institutional leadership, program teams, partner institutions, and the Monitoring, Evaluation and Learning (MEL) Specialist, the successful candidate will transform complex datasets into meaningful insights that support institutional effectiveness, program performance, accountability, and strategic planning.

This position offers a unique opportunity to help shape data and analytics practices across a growing network of leading African universities and innovation ecosystems.

The scope of responsibilities will include, but not be limited to:

Key Responsibilities

Data Architecture and Systems

- Partner with CMU's Institutional Research and Analysis teams to support the design, implementation, and continuous improvement of data architectures, systems, and workflows that enable effective collection, storage, integration, analysis, and reporting of institutional and program data.
- Develop and maintain scalable data pipelines, databases, reporting processes, and analytical environments that consolidate data from multiple programs, partners, and platforms.
- Promote data governance standards, data quality protocols, documentation practices, and interoperability across systems and institutions.
- Identify opportunities to improve efficiency, reliability, and scalability through automation, process improvement, and technology adoption.
- Develop and maintain data dictionaries, metadata standards, and technical documentation.

Data Management and Quality Assurance

- Oversee processes for data validation, cleaning, transformation, and quality assurance across multiple data sources.
- Monitor data completeness, consistency, and accuracy, and work with stakeholders to resolve data quality issues.
- Establish and maintain processes that ensure data integrity, security, confidentiality, and compliance with institutional policies and applicable regulations.
- Support the development and implementation of standardized data collection and reporting practices across programs and partner institutions.

Analytics and Insight Generation

- Conduct quantitative analyses to identify trends, patterns, opportunities, risks, and performance drivers across programs and institutional activities.
- Develop analytical products that support operational effectiveness, strategic planning, and organizational decision-making.
- Produce technical analyses, data briefs, and analytical reports that communicate findings in a clear and accessible manner.
- Respond to ad hoc analytical requests from institutional leadership, program teams, and other stakeholders.
- Work closely with the MEL Specialist to ensure analytical outputs support monitoring, evaluation, learning, reporting, and strategic decision-making needs.

Reporting, Visualization, and Business Intelligence

- Collaborate with CMU-Africa leadership to design, develop, and maintain dashboards, scorecards, visualizations, and reporting tools that provide timely and actionable insights to stakeholders.
- Automate recurring reports and reporting processes to improve efficiency, consistency, and accessibility of information.
- Present analytical findings through effective visualizations and reporting products tailored to technical and non-technical audiences.
- Support institutional and program reporting requirements through the provision of validated datasets, reporting outputs, and technical documentation.

Advanced Analytics and Forecasting

- Apply advanced analytical methods to support forecasting, trend analysis, scenario planning, and predictive modeling.
- Explore innovative approaches for leveraging data to improve program performance, resource allocation, and strategic planning.
- Identify opportunities to strengthen data utilization through emerging technologies, analytical methodologies, and business intelligence solutions.

Partner Data Capacity Strengthening

- Provide technical support to partner institutions on data systems, reporting infrastructure, data management practices, and analytics tools.
- Support the adoption of common data standards, reporting processes, and data quality practices across partner networks.
- Deliver training, coaching, and technical assistance on data collection systems, business intelligence platforms, dashboard development, and analytical methodologies.
- Contribute to communities of practice and peer-learning initiatives focused on strengthening data and analytics capabilities across partner institutions.

Stakeholder Engagement and Collaboration

- Collaborate closely with the MEL Specialist to ensure alignment between data systems, analytical outputs, monitoring frameworks, and reporting requirements.
- Work with program teams, researchers, faculty, institutional leadership, and partner institutions to understand business needs and develop appropriate analytical solutions.
- Build productive relationships with internal and external stakeholders to strengthen data-driven decision-making and organizational effectiveness.
- Collaborate with technology teams, vendors, and other partners to enhance institutional data infrastructure and analytical capabilities.

Other Responsibilities

- Undertake other duties and special projects as assigned in support of CMU-Africa's mission and strategic priorities.

Qualifications

EDUCATION AND EXPERIENCE

- Master's degree in data science, Statistics, Computer Science, Information Systems, Analytics, Mathematics, Economics, Engineering, or another highly quantitative field.
- An equivalent combination of education and relevant experience may be considered.
- Minimum of five years of progressively responsible experience in data analytics, business intelligence, data management, data science, or a related field.
- Demonstrated experience designing and managing complex data systems, reporting infrastructures, or business intelligence environments.
- Experience working with large and complex datasets from multiple sources.
- Experience developing dashboards, automated reporting systems, and analytical products for decision-makers.
- Experience supporting multi-partner, multi-institutional, or multi-country initiatives is highly desirable.
- Experience in higher education, research, international development, nonprofit, or social impact environments is an advantage.
- Experience supporting externally funded programs and stakeholder reporting requirements is desirable.

Knowledge, Skills and Competencies

The successful candidate will demonstrate:

- Strong expertise in data analytics, business intelligence, data management, and reporting systems.
- Advanced proficiency in Power BI, Tableau, Looker Studio, or comparable business intelligence platforms.
- Strong skills in SQL and at least one programming language such as Python or R.
- Experience working with databases, APIs, data integration tools, cloud-based data environments, and data automation technologies.
- Strong understanding of data governance, data quality management, privacy, security, and documentation practices.
- Ability to translate complex data into meaningful and actionable insights for diverse audiences.
- Excellent analytical, problem-solving, and critical-thinking skills.

- Strong communication and presentation skills.
- Excellent stakeholder management and relationship-building abilities.
- Strong organizational skills and attention to detail.
- Ability to manage multiple priorities and thrive in a dynamic, fast-paced environment.
- Commitment to innovation, continuous improvement, and evidence-based decision-making.

Why Join CMU-Africa?

This is a unique opportunity to help shape the data and analytics capabilities of a world class technology and higher education institution operating on the African continent. You will work alongside distinguished faculty, researchers, program leaders, and partner institutions while helping to build the systems, insights, and analytical capabilities that support transformative education, research, innovation, and workforce development initiatives across the continent.

If you are passionate about data, technology, and using analytics to solve complex challenges at scale, we encourage you submit your application and resume by August 30, 2026 through this link: <https://www.africa.engineering.cmu.edu/about/careers.html>