
Terms of Reference for the Recruitment of Data Scientists

Job title: Data Scientist

Department: Research, Innovation & Data Science

Reports to: Head of Research, Data and Grant Development

Number of positions: 2

BACKGROUND

The Center for Impact, Innovation and Capacity Building for Health Information Systems and Nutrition (CIIC-HIN) is a multidisciplinary research and implementation organization committed to advancing evidence-informed policy, strengthening health systems, and improving population health and nutrition outcomes. CIIC-HIN's mandate spans health information systems and data governance, service delivery quality and patient safety, health financing and policy analysis, implementation science, climate and health, and nutrition. Working with governments, development partners, academic institutions, and civil society, the Center designs and executes solutions that enhance the generation, quality, and use of data; improve program performance and equity; and build sustainable institutional capacity aligned with Universal Health Coverage (UHC).

CIIC-HIN implements a wide portfolio of work including systems integration and optimization, routine and survey data analytics, monitoring and evaluation, operational and clinical research, capacity-building programs, and innovation pilots across public health priorities such as immunization, maternal and child health, infectious diseases, and non-communicable diseases. A core element of this portfolio is institutionalizing analytics and learning: CIIC-HIN embeds dedicated data science and M&E expertise within teams to translate data into actionable insights that inform service quality improvement, program design, resource allocation, and policy formulation at national and sub-national levels.

OBJECTIVE OF THE POSITION

The Data Scientist will support CIICHIN to:

- Enhance institutional data analytics capacity and capabilities across projects
- Support both local and international projects implemented by CIICHIN
- Integrate and analyze indicators and datasets from multiple national and project-based platforms

- Provide evidence-based insights to improve decision-making and health outcomes
- Lead advanced statistical modeling efforts using R, Stata, or Python applying techniques such as regression, time series, Bayesian methods, geospatial analytics, and causal inference, depending on project needs.
- Embed AI and machine learning approaches into predictive modeling and health forecasting tools where applicable, to improve accuracy, relevance, and actionability.
- Actively contribute to grant proposal writing and resource mobilization efforts to strengthen sustainability

SCOPE OF WORK

The Data Scientist will be responsible for the following tasks:

a. Data Integration & Management

- Participate in the assessment and mapping of metadata across key indicators and datasets
- Support integration of data from multiple national and project-based health information systems
- Ensure consistency, accuracy, and harmonization of indicator definitions and metadata
- Manage data pipelines

b. Analytics & Visualization

- Develop advanced analytics models including the integration of AI to track health system performance and outcomes
- Generate retrospective and cross-sectional analyses to identify systemic bottlenecks and trends

c. Capacity Strengthening & Institutionalization

- Work with CIICHIN and stakeholders to train staff and partners in data analytics, visualization, and interpretation
- Document processes, workflows, and analytical frameworks for sustainability

d. Grant Development & Resource Mobilization

- Participate actively in grant proposal writing in collaboration with CIICHIN research team
- Provide data-driven inputs and evidence to strengthen proposals

e. Monitoring & Reporting

- Contribute to quarterly and annual project reports by providing data-driven insights
- Document use of dashboards and analytics in program supervision and policy decisions
- Participate in preparation of final data review reports highlighting system bottlenecks and recommendations

QUALIFICATIONS AND EXPERIENCE

a. Educational Background

- A master's degree in data science, Statistics, Big Data Analytics, Mathematical Sciences, or a closely related field is required.
- A PhD in any of the above fields is strongly preferred.

b. Professional Experience

- Minimum of 3 years of applied experience in data analytics, preferably in health-related domains or public health.
- Proven experience in the integration of data from multiple platforms and managing complex data pipelines.

c. Technical Competencies

- Advanced skills in programming and statistical analysis using Python or R, with proficiency in SQL.
- Experience with machine learning, artificial intelligence (AI) techniques, and predictive analytics—particularly for health outcome modeling—is highly desirable.
- Strong command of data visualization, modeling, and interpretation for decision support.

d. Certifications

- Relevant professional certifications such as DASCA's Senior Big Data Analyst (SBDA) or Associate Big Data Analyst (ABDA) are considered an added advantage.

e. Analytical and Strategic Thinking

- Demonstrated ability to translate complex datasets into policy-relevant insights and programmatic recommendations.

f. Communication and Collaboration

- Excellent communication, presentation, and capacity-building skills, especially in multidisciplinary team environments.
- Experience in stakeholder engagement, technical assistance, or training is a plus.

g. Additional Assets

- Proven contributions to or leadership in grant proposal writing and research project design are strong advantages.

HOW TO APPLY:

Interested candidates should scan and compile all application documents into a single file and submit the following:

- A cover letter outlining relevant experience and motivation.
- A detailed CV with at least three professional references.
- Copies of professional certificates (where applicable)
- Copies of academic certificates.

Subject line: Application – Data Scientist

If you believe you meet the above requirements and wish to view a more detailed job description and wish to apply,

visit this link: <https://ciichin.org/careers/>

The application deadline is **Friday, 17th October 2025.**

Incomplete files or late applications will not be considered.

Only shortlisted candidates will be contacted.

Dr. Felix Kitema RUBUGA
Managing Director - CIIC-HIN