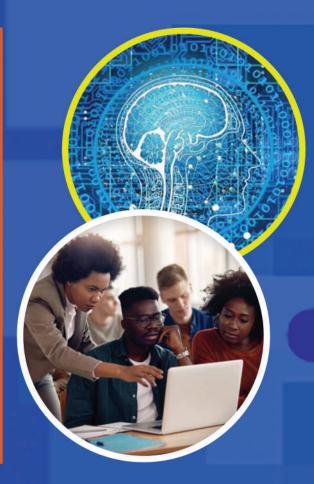# Call for Applications for Biomedical Data Science

[Data Science for Child Health Now in Ghana (DS-CHANGE) Training Program]

## DEGREES

Biomedical data science is the interdisciplinary field of inquiry in which quantitative and analytical approaches, processes, and systems are developed and used to extract biomedical knowledge and insights from increasingly large and/or complex sets of data.

The Kwame Nkrumah University of Science and Technology (KNUST) seeks applications for trainees to pursue postdoctoral training to complete an MPhil or PhD in Biomedical Data Science with focus areas on imaging, public health, or computational biology.

## BACKGROUND

KNUST in collaboration with the National institute for Mathematical Sciences and in partnership with the University of Washington and Seattle Children's in the USA has been awarded a training grant by the United States National Institutes of Health (NIH) and Fogarty International Centre. Our program is part of the United States NIH Data Science Initiative for Africa or DSI-Africa. The Data Science for Child Health Now in Ghana (DS-CHANGE) training program is building data science research capacity for Ghana and West Africa.

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## REQUIREMENTS FOR APPLICANTS

- At minimum, completion of an undergraduate degree is required. We will accept applications from individuals with MPhil or PhD degrees in relevant areas.
  - Relevant disciplines invited to apply for this program, including but not limited to health-related fields (medicine, nursing, public health, pharmacy, other clinical fields), mathematical sciences (statistics, economics, mathematics), or engineering fields (computer science, engineering).

- Excellent quantitative skills
  - Evidence of training/use of computing programming
  - Evidence of training in calculus

- Excellent written and spoken English

- Meets the requirements of current program to which they are applying (see below)

- Individuals in the early stages of their career, e.g. less than 10 years from their last degree.

- Junior faculty and existing employees are eligible to apply, but must be relieved from their work duties while they complete this full-time program.

- Preferences will be given to applicants who:
  - Submit a letter by an employer indicating they will have a position following training in Ghana at a Ghana academic, government or other business/non-profit that focuses on health and will leverage data science training.
  - Have experience working in a data-intensive area
  - Demonstrate evidence of an existing commitment to furthering biomedical data science in Ghana or Africa is strongly preferred.

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## OPPORTUNITY FOR FINANCIAL SUPPORT

Based on initial performance, a select number of trainees will receive funding through the U.S. NIH training grant. Funded DS-CHANGE trainees will have access to a multidisciplinary team of faculty at KNUST and UW with expertise in data science and who will support biomedical data science trainees who choose to work on one of the 3 top 10 problems in child health in Ghana including (1) birth defects (orofacial clefts), (2) injury control and prevention, or (3) malaria.

The DS-CHANGE training award will be for for 2 years (MPhil) or 4 years (PhD) and will include:

- Tuition and fees at KNUST
- Stipend for living expenses during training at KNUST
- Travel funds to present at an international conference
- Travel expenses for a quarter of learning at the University of Washington, Seattle, WA
- Project funds
- A laptop, coverage of publications costs and books

## APPLICATION PROCESS AND SUPPLEMENTAL MATERIALS

Trainees interested in the Biomedical Data Science program, should apply to one of the following existing programs at KNUST:

- Biodata Analytics and Computational Genomics
- Scientific computing and Industrial modeling

In addition to the materials for the above program, interested applications should also include a 2-page letter addressed to "DS-CHANGE Biomedical Data Science Committee" and explain:

- Your background and its relevance to this program
- Why and how this program will facilitate your career
- Your plans or vision for your work after you complete your degree
- And indicate your focus area: public health, imaging, or computational biology

## SELECTION AND START DATE

- Selection for entry into the KNUST Biomedical Data Science program will be competitive.
- Selection of DS-CHANGE trainees will be after courses begin and will be competitive
- Finalists for both the degree program and the DS-CHANGE training slots will participate in a short Zoom interview with a selection panel.
- We encourage applications from those underrepresented in data science (e.g. women)
- The first cohort will start in **January 2023**.
- Applications after the deadline will not be considered.

**DEADLINE FOR SUBMITTING YOUR APPLICATION IS NOVEMBER 30TH, 2022.**

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