New PhD Studentship Call, 2023

RESPONSIBLE AI FOR DEVELOPING A ROBUST PUBLIC HEALTH SURVEILLANCE SYSTEM

A fully funded, 4-year full-time PhD studentship position based at the Kwame Nkrumah University of Science and Technology (KNUST) and hosted by the Vector-Borne Infectious Disease Research Group is now open to applications.

Background

The current public health surveillance systems in developing countries like Ghana focus on known priority diseases with specific case definitions, making it ineffective in detecting novel infections that do not fit existing criteria. Consequently, outbreaks caused by these unidentified infections often go unnoticed, allowing them to persist in vulnerable communities until they escalate into pandemics due to delayed responses. Such surveillance systems lack adaptability and robustness and pose a constant risk of unpreparedness and inadequate response to emerging health threats. Hence, the selected candidate will work with the research team to devise a robust public health surveillance system powered by responsible artificial intelligence-based automated vector surveillance system and supported by edge computing and internet of things. The candidate would develop climate and environmentally-driven, dynamical host–vector models to predict the risk of viral outbreaks in current and future climates. The risk-targeted early detection surveillance system developed during the PhD will improve the capacity of public health systems to detect, prepare and respond effectively to health threats.

Candidate requirements

- An MSc/MPhil degree in physical and computational sciences (Mathematics, Physics, Computer Science and Meteorology and Climate Science/MPH Public health)
- Demonstrable ability in Artificial Intelligence and Mathematical Modeling
- Interest in learning vector Biology
- Excellent written and oral communication skills

How to apply

- 2-page CV including names of 2 academic references
- 1 page letter of research motivation
- Send an email to kingsbadu@gmail.com/ kbadu@knust.edu.gh

Application deadline: 30th November, 2023