



Employment Opportunity

Background

The Infectious Diseases Institute (IDI) is a Ugandan not-for-profit organization whose mission is to strengthen health systems in Africa, with strong emphasis on infectious diseases, through research and capacity development. IDI has six operational areas through which it works to achieve its mission: Prevention, Care and Treatment; Training, Research, Laboratory services (including the CAP-certified IDI Core Lab & Translational Lab), Global Health Security and Health System Strengthening.

Makerere University College Of Computing Information Sciences (COSIS) been awarded a grant from the International Development Research Centre (IDRC) in respect of a project titled "End-to-end AI and data systems for targeted surveillance and management of COVID-19 and future pandemics affecting Uganda"– COAST). The COAST project is in collaboration with Infectious Diseases Institute (IDI), is an NGO owned by Makerere University. IDI is supporting the Government of Uganda COVID response through work including but not limited to surveillance, IPC and case management.

IDI is looking for a talented Junior AI & Bioinformatics trainee to support AI and Machine Learning applications in Health in the COAST project.

In order to contribute to achievement of the above objectives, IDI wishes to recruit a motivated and competent individual for the position as indicated below:-

Job Title : AI trainee
Vacancy Code : TRA-X001
Classification : Trainee
Duty Station : Kampala



General Summary:

Work will include:

Leading on the decision support system for the call for life (CFL) Covid for Workstream 2 (Detection and diagnosis tools for improved patient care and management) of the COAST project. This will involve working closely with the Academy Call for Life team and the ACEi team to develop the decision support algorithm for CFL COVID. The AI trainee will report to Daudi Jingo, Head of ACEi, but will have regular communication from the Academy COAST Investigator.

Other activities may include:

- Support of COVID-19 Chatbot development team
- Support data modelling team in COVID forecasting
- Integration of genomic and clinical data into applications
- Testing and validating algorithms for HIV decision support within IDI datasets

Key Responsibilities:

- Interrogate, understand and manage the Call for Life COVID dataset in preparation for decision support
- Curate annotated datasets for Supervised Learning methods
- Testing and validating algorithms for CFL COVID and other health applications
- Train the developed model and run evaluation experiments
- Supporting data visualization of complex health datasets
- Curating and validation/proof reading of text and audio data
- Working with Natural Language processing lead to work with language data analysis
- Devise data representation and visualization protocols
- Evaluate algorithms and tools for COVID related app tasks including chatbot, interactive voice response tools and decision support system



- Organize and interpret biomedical data (genomic, clinical and epidemiological) for the projects
- Assist with feature selection and algorithm optimisation
- Remain updated in the rapidly changing field of machine learning
- Learn and adapt NLP and NLU techniques for project's work streams
- Compilation and writing of project reports
- Attend Academy CFL and other relevant meetings
- Attend relevant ACEi meetings
- Attend COAST project meetings and steering committee meetings as appropriate

Required Qualifications skills and attributes:

- Proven training in data science and its application on biomedical or health data
- Training in bioinformatics and computational biology
- Previous or ongoing engagement with a biomedical research project
- Understanding of ML techniques for text representation, semantic extraction techniques, data structures and modeling
- Deep understanding of health data representation techniques, statistics and classification algorithms
- Knowledge of Python, Unix and R
- Able to work in a team environment
- Experience with machine learning frameworks (like Keras or PyTorch) and libraries (like scikit-learn)
- Outstanding skills in machine learning methods and techniques.
- MSc level training in bioinformatics and/or data science
- Strong writing and communication skills
- An analytical mind with problem-solving abilities



Candidates that meet the above criteria and have what it takes to excel in these positions should send their CVs, including details of email address, present position, current remuneration, Certificate/testimonials and address of three (3) Referees plus telephone contact to the stipulated email address not later than **17th October 2021**. *Please follow this link <https://idi.mak.ac.ug/hrms> to apply for this position.*

Key Notes:

- 1. IDI is an equal opportunity employer and does not charge a recruitment fee or any other fees at any stage of the recruitment process*
- 2. Internal candidates who meet the required specifications and have worked with IDI for a period of at least one year will be given priority.*
- 3. Make sure that your application letter, CV and certificates are attached as one document*
- 4. Indicate the Vacancy Code as the subject for your email*
- 5. Only shortlisted candidates will be contacted*
- 6. Any form of canvassing will lead to automatic disqualification.*

The Senior Human Resource Manager
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