UNIVERSITY OF DAR ES SALAAM

COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Call for applications: MSc Partial Scholarships in Artificial Intelligence and Climate Change Research Project

Project Outline

The University of Dar es Salaam (UDSM), through the Department of Computer Science and Engineering at the College of Information and Communication Technologies (CoICT), is currently implementing a research project "***Development of an artificial intelligence-based application for predicting chronic respiratory disease cases for mitigating climate change impact on air quality in Tanzania (AI4PreCRD)***" funded by the Tanzania Commission for Science and Technology (COSTECH). The AI4PreCRD is a collaborative project between the University of Dar es Salaam (UDSM), Muhimbili University of Health and Allied Sciences (MUHAS), Mbeya University of Science and Technology (MUST), and Sokoine University of Agriculture (SUA).

The project focuses on improving the detection of chronic respiratory diseases associated with air quality by developing artificial intelligence (AI)/machine learning (ML) methods to predict chronic respiratory diseases and air quality cases. The activities undertaken in this project include training of two (2) Master's students on data science, AI/ML models, mobile application development, and health. While undertaking MSc studies, the students will be supervised by researchers involved in the project as well as being involved in field activities. The University of Dar es Salaam is hereby announcing two (2) partial scholarships for Master's studies. The partial scholarships will cover **research costs only** as stipulated in the UDSM postgraduate guidelines (excluding tuition fees and stipends).

Qualifications

All applicants must possess the following:

- Applicant must be a Tanzanian citizen.
- Applicant must be aged not more than 45 years.
- An admission letter from the University of Dar es Salaam or Muhimbili University of Health and Allied Sciences (MUHAS) for the 2024/2025 academic year.
- Previous publications/experience related to the research theme is considered an advantage.

- An applicant with relevant knowledge and experience in the following areas: Programming Languages: Python, R, etc, Machine Learning: creating training pipelines and evaluating models using toolkits such as PyTorch, Scikit-Learn, Keras and TensorFlow, and software engineering practices, including agile methodology techniques, are considered an advantage.
- Willingness to commit full-time effort to his or her MSc training program.
- Possess good writing, communication and research skills in English.
- Qualified female candidates are highly encouraged to apply.
- Academic staff from University of Dar es Salaam (UDSM), Muhimbili University of Health and Allied Sciences (MUHAS), Mbeya University of Science and Technology (MUST), and Sokoine University of Agriculture (SUA) are encouraged to apply.

Application Procedure

Applications must include the following documents:
- A cover letter describing motivation for applying for the MSc partial scholarship.
- Up-to-date curriculum vitae (CV).
- Admission letter from the University of Dar es Salaam or Muhimbili University of Health and Allied Sciences (MUHAS) for the 2024/2025 academic year.
- Certified copies of academic transcripts, certificates, ID and birth certificate.
- Letters of recommendation from **three** referees, including their phone numbers and e-mail addresses.
- Research concept note (max 3 pages excluding references) focusing on improving the detection of chronic respiratory diseases associated with air quality by developing the artificial intelligence (AI)/machine learning (ML) methods to predict chronic respiratory diseases and air quality cases in Tanzania. The following details must be included:
  - Statement of the research problem.
  - The main objective and specific objectives.
  - Research questions.
  - Selection and rationale of the proposed study area.
  - Methodological approach, including fieldwork considerations.
  - Time plan.
  - Budget.

Shortlisted applicants will be invited to attend a **selection interview** and **presentation of their research concept notes** as part of the selection process. The date of the interview will be communicated **within two (2) weeks** after the application deadline.

The entire application package must be submitted by e-mail with the subject title "**AI4PreCRD MSc Partial Scholarships Application**" to the Head of the Department of Computer Science and Engineering (cse@udsm.ac.tz) and copied to Dr. Jimmy Mbelwa (jmbelwa@udsm.ac.tz) and Dr. Deogratias Mzurikwao (deogratias.mzurikwao@muhas.ac.tz) before **31.07.2025**. Applications received later than this date will not be considered. Further details may be obtained via the above e-mail address.

MSc enrolment and evaluation

The successful candidate will be offered a 2-year MSc partial scholarship covering research costs only and fieldwork costs. The MSc supervision will be a joint effort between the University of Dar es Salaam (UDSM), Muhimbili University of Health and Allied Sciences (MUHAS), Mbeya University of Science and Technology (MUST), and Sokoine University of Agriculture (SUA). Evaluation of the progress of the MSc. activities will be done according to current regulations at the university of enrollment.