



SOFTWARE ENGINEER (BIOINFORMATICS)

(5-year contract; Payclass 10)

Computational Biology Division

Department of Integrative Biomedical Sciences

Faculty of Health Sciences

The Computational Biology Division, which is in the Department of Integrative Biomedical Sciences and the Institute of Infectious Disease & Molecular Medicine, Faculty of Health Sciences, leads the Bioinformatics activities at the University of Cape Town. The group also leads H3ABioNet, a pan African bioinformatics network, and the NIH Data Science for Health in Africa (DS-I Africa) Open Data Science Platform (ODSP). As part of the DS-I Africa initiative we are developing the eLwazi open data science platform which will implement Global Alliance for Genomics and Health (GA4GH) standards and application program interfaces (APIs). The ODSP will host data and tools from DS-I Africa research hubs and provide access to Cloud computing, as well as training and support to its users. The Software Engineer will be responsible for development of the ODSP, including integrating a data registry, a metadata catalogue, tools registry, workflows and execution of workflows on a variety of computing environments. He/she will work with data experts on the development of ODSP and will contribute to development and implementation of GA4GH standards and APIs for federated analysis. Applications are invited from suitably qualified candidates for this 5-year, **fixed term contract** position of a Software Engineer, **for appointment as soon as possible**. The position will be situated in the Computational Biology Division at the University of Cape Town.

Requirements:

- Masters degree (or equivalent) in Bioinformatics, Computer Sciences or Engineering with 3 years' experience in software engineering or Honours degree with 4-5 years' experience in software engineering
- Experience with Java and/or Python
- Experience in developing RESTful APIs
- Proficiency in working with common structured data formats, including JSON and XML
- Evidence of organizational skills
- Good communication and written skills

Advantageous:

- Experience in/knowledge of biomedical data and tools
- Proficiency with source control (git) and collaborative project management platforms (GitHub, Slack)
- Experienced with writing reusable workflows in Nextflow, Snakemake, Workflow Description Language (WDL), or Common Workflow Language (CWL)
- Experience in deploying virtual environments and applications on public cloud providers, such as AWS, Azure, or Google Cloud
- Able to work well with individuals from diverse fields and backgrounds

Responsibilities:

- Develop the open data science platform infrastructure
- Implement and contribute to GA4GH standards and APIs for federated analysis
- Integrate data and tool registries
- Develop containerized workflows

The annual cost of employment for 2022 for this 5-year, fixed term contract is between R547 299 and R643 880.

For enquiries about this post, please contact Nicola Mulder at nicola.mulder@uct.ac.za.

To apply, please e-mail the below documents in a **single pdf file** to Ms Vathiswa Mbangi at recruitment05@uct.ac.za

- UCT Application Form (download at <http://forms.uct.ac.za/hr201.doc>)
- Motivation letter that speaks to requirements of the position, and
- Curriculum Vitae (CV)

Please ensure the title and reference number are indicated in the subject line.

An application which does not comply with the above requirements will be regarded as incomplete. Only shortlisted candidates will be contacted and may be required to undergo a competency test.

Telephone: 021 650 3003

Website: cbio.uct.ac.za

Reference Number: E210438

Closing date: 31 January 2022

UCT is a designated employer and is committed to the pursuit of excellence, diversity and redress in achieving its equity targets in accordance with the Employment Equity Plan of the University and its Employment Equity goals and targets. Preference will be given to candidates from the under-represented designated groups. Our Employment Equity Policy is available at www.hr.uct.ac.za/hr/policies/employ_equity

UCT reserves the right not to appoint.