Developer for Cloud-based Virtual Research Environments

Vacancy - Terms of reference

A. Job Description

JOB TITLE: Developer for Cloud-based Virtual Research Environments

PURPOSE: Contribute to constructing Virtual Research Environments, including data management and processing, distributed workflow automation and performance optimisation in Cloud environments

LOCATION: LifeWatch ERIC Virtual Laboratory and Innovations Centre (VLIC), Amsterdam, The Netherlands

POSITION: Full-time, two-year term with a possible extension, starting as soon as possible

COMPENSATION: Between €2,960 and €4,670 gross per month, depending on relevant experience (equivalent to university salary scale 10), based on 38 hours per week

B. Main responsibilities

We are looking for a 2-year scientific programmer to develop services and tools for a Virtual Research Environment (VRE), including distributed data management, data and service discovery, workflow composition, service deployment and performance optimisation in Cloud environments.

The candidate will closely work with the scientists from the domains of ecosystem and biodiversity, develop reusable solutions to tackle data challenges, validate the software via use cases, and integrate software components as part of a distributed Virtual Research Environment for a broader community. The candidate will actively review the state-of-the-art technologies in the context of semantic web, knowledge graph, search engine, big data and scientific workflow management, follow Agile, Co-development and other best practices of modern software engineering in Cloud environments to effectively deliver solutions for the VRE.

Contract and Working Environment

The candidate will be contracted by LifeWatch ERIC VLIC and will work within the premises of the Multi Scale Networks Systems Group (MNS), Informatics Institute at University of Amsterdam.

The MNS group is part of the Systems and Security Lab (SNE), one of the three research clusters at the Informatics Institute. The group focuses its research on the fundamental architectural problems that arise from the interconnection of systems and data flows, in particular the delivery of secure and sustainable ICT services across multiple domains. Within the MNS group, the "quality critical distributed computing" team is especially interested in novel programming and control models for distributed applications across large scale cloud infrastructures, and in developing interoperable data management and virtual research environment solutions for enabling interdisciplinary researches, e.g., in environmental and earth sciences or medical domains. The team leads the VRE development in the LifeWatch ERIC VLIC, and provides the infrastructure automation solution to several projects such as ENVRI-FAIR and CLARIFY.

The candidate will closely collaborate with domain scientists from the domains of ecosystem and biodiversity in the groups of the Biogeography & Macroecology (BIOMAC) lab (http://biomac.org/) and the Department Theoretical and Computational Ecology (http://ibed.uva.nl/research). It is expected that your work result in scientific papers, and that you participate and present the research at LifeWatch ERIC and other international meetings.

We offer a position for 38 hours a week in an exciting, dynamic and international research environment, starting as soon as possible. The full-time appointment will be on a temporary basis for a maximum period of 2 years, with opportunities for an extension.

The Collective Labour Agreement for Dutch Universities will be applicable for salary. The annual salary will be increased by 8% holiday allowance and 8.3% end-of-year bonus. You will participate in the LifeWatch ERIC Netherlands pension scheme with RESAVER.

C. The ideal candidate should meet the following requirements

- A Master's or PhD degree in computer science, Artificial Intelligence or a related discipline.
- Strong interest in learning new technologies.
- Willingness to work in a multidisciplinary team (application domains, computer science, software engineering).

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- Ability to speak and communicate in English at an academic level, both verbal and written.
- Experience in one or more major pre-programming languages (e.g., Java, Python).
- Familiar with UNIX/Linux environment.
- Up-to-date knowledge about various software development and deployment tools including minimally Git/GitHub.
- Experience with technologies (more is preferred): semantic web, ontology, elastic search, search engine, knowledge graph, and knowledge base.

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- Experience with web applications and libraries (e.g., Jupyter, HTML, JavaScript, and PHP).

D. The vacancy is subject to the following procedure

Applications should include the following documents, all in one PDF file and in the following order:

1. Motivation letter (max. 1–2 pages, containing your motivation for applying and a description of your previous experience and expertise);
2. CV (with applicant's email address and telephone number, description of education and –if applicable– publication list, and contact details of two professional references [name, address, telephone and email]. References will only be contacted if the candidate is shortlisted;
3. If a non-EU citizen, please provide information on working/residence permit status relevant to an appointment with a Dutch organisation.

Applications shall be written in English and addressed to Dr Zhiming Zhao, Assistant Professor, Multiscale Networked Systems (daily supervisor), email: z.zhao@uva.nl (visit https://staff.fnwi.uva.nl/z.zhao/) by 8 January 2023. Shortlisted candidates will be re-contacted as soon as possible after the closing date. References will only be contacted if the candidate is shortlisted. Candidates may be called for an interview with the LifeWatch ERIC VLIC and asked to undertake appropriate tests.

LifeWatch ERIC is an equal opportunity employer, and encourages all qualified candidates to apply, regardless of race, gender, age, national origin, or sexual orientation.

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