Future Software Systems Architectures (FSSA)
School of Computing
Research Assistant
Up to 30 month fixed term contract

Background
The Future Software Systems Architectures FSSA project is focused on developing AI based solutions to support the transition towards emerging software architectural paradigms, such as Function as a Service (FaaS). The FSSA project is jointly funded by the Disruptive Technologies Innovation Fund (DTIF), the FINEOS Corporation and FourTheorem Ltd.

This is a cutting-edge research-led project, attempting to adopt AI techniques to address a large emerging market need: the adoption of pay-per-use hardware paradigms / platforms. Partners to the project include Dublin City University, Lero – the Irish Software Research Centre, FINEOS and fourTheorem Limited.

Background & Role
We are seeking two Research Assistants to research, design and develop and machine-driven architectural discovery and transformation system that will automate aspects of architectural transformation. This transformation will require automated validation, and will therefore also require transformation of the testing artefacts, including Test Data, Procedures, Unit Tests, Continuous Integration and Deployment assets.
Competency from front end to back-end is required for this highly innovative and ground-breaking project. More specific details can be discussed upon interview.

Responsibilities
Reporting to the project lead Associate Professor Paul Clarke, the Research Assistants will:

• Acquire and deploy technical architecture in an agile engineering process within the project.
• Participate in additional training to attain competency in software engineering processes as necessitated.
• Demonstrate a dedication to quality over expediency in software development
• Engage regularly and effectively with project partners.
• Identify and populate in dialogue with Dr. Clarke, revised roadmaps for the proposed system.
• Develop cutting edge software based solutions to architectural and component transformation and modernisation, in strict accordance with Non-Disclosure Agreements (NDAs) as specified by project partners.

Skills

• Develop well-designed software that is clear, documented, tested and delivered continuously to production.
• Review requirements identified by the partners and project leads through customer workshops and conveyed via the product backlog and participate in the clarification of features and estimates within the Scrum process. Ensure deviations from requirements are clearly documented and agreed with the project manager prior to completion.
• Take responsibility for the technical quality of the features delivered across the team, including documentation, testing strategies, and code.
• Identify and address product bugs, deficiencies, and performance bottlenecks.
• Remain up-to-date on emerging technologies and architecture and propose ways to use them in current and upcoming projects.
• Leverage technical knowledge to cut scope while maintaining or achieving the overall goals of the product.
• Leverage technical knowledge to improve the quality and efficiency of product applications and tools.

Technologies

• Relevant development experience with at least one popular programming language such as Java, Ruby, Python, Node.js/Javascript, Rust, Go, or C/C++, C#.
• Experience using existing libraries, frameworks, and RESTful APIs to create complex applications.
• Experience using code management and revision services such as Github and Bitbucket
• Familiarity with Test Driven Development, Continuous Integration and Continuous Delivery.
• Strong communication skills for documenting workflows, tools, or complex areas of a codebase.
• Prior knowledge of static and dynamic source code analysis a distinct advantage.
• Understanding of basic statistical clustering techniques would be beneficial.
• Ability to thrive in a fast-paced environment and multi-task efficiently.
• Ability to work and collaborate in a team.
• Strong analytical and troubleshooting skills.

Minimum Criteria

Candidates will have a degree in an appropriate area or equivalent (NFQ Level 8). Typically, an honours BSc in Computer Science, Software Engineering or a related discipline with strong software and programming skills and relevant experience in web application development with substantial backend integrations is expected.
Mandatory Training

The post holder will be required to undertake the following mandatory compliance training: Orientation, Health and Safety and Data Protection (GDPR). Other training may need to be undertaken when required.

For informal discussions email Dr. Paul Clarke at paul.m.clarke@dcu.ie

Please do not send applications to this email address, instead apply as described below.

Salary scales: €22,609 - €35,218 p.a (Research Assistant)

* Appointments will be commensurate with qualifications and experience, and will be made on the appropriate point of the salary scales, in line with current Government pay policy

Closing Date: 17th Jan 2020

Application Procedure:
Application forms are available from the DCU Current Vacancies (open Competitions) website at http://www.dcu.ie/vacancies/current.shtml and also from the Human Resources Department, Dublin City University, Dublin 9. Tel:+353 (0) 1 7005149.

Applications should be submitted by e-mail with your completed application form to hr.applications@dcu.ie or by post to the Human Resources Department, Dublin City University, DCU Glasnevin Campus, Dublin 9, D09W6Y4.

Please clearly state the role that you are applying for in your application and email subject line: #RF1309 Research Assistant – FSSA School of Computing

Dublin City University is an equal opportunities employer and is committed to promoting gender equality reflected in its attainment of the Athena SWAN Bronze Award. Information on a range of university policies aimed at creating a supportive and flexible work environment are available at www4.dcu.ie/policies/policy-starter-packs.shtml.