



Job Description

Research Assistant Future Software Systems Architectures (FSSA) School of Computing Up to 14 months, 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 a Research Assistant to join an existing team focussed on the research and development of a 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 Senior Research Fellow, the Research Assistant 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 commitment to quality over expediency in software development
- Engage regularly and effectively with project partners.

- Identify and populate in dialogue with the Senior Research Fellow, revised roadmaps for the proposed system.
- Assist with the development 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

- Assist with the development of 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 communicated 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.

Essential Training

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