

Job Description

Research Centre: Insight SFI Research Centre for Data Analytics

Post Title: Analyst Programmer, KowRoo – AP II

Post Duration: Fixed Term Contract up to 11 months

Dublin City University

Dublin City University www.DCU.ie is a young, ambitious and vibrant University, with a mission ‘to transform lives and societies through education, research, innovation and engagement’. Known as Ireland’s ‘University of Enterprise and Transformation’, it is committed to the development of talent, and the discovery and translation of knowledge that advances society and the economy. DCU is the Sunday Times Irish University of the Year 2021.

The University is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. It currently has more than 18,000 students enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education. DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on creating a transformative student experience, and its positive social and economic impact. This exceptional commitment on the part of its staff and students has led to DCU’s ranking among the top 2% of universities globally. It also consistently features in the world’s Top 100 Young Universities (currently in QS Top 70 Under 50, Times Higher Top 150 Under 100).

DCU is placed 84th in the world, in the Times Higher Education University Impact Rankings – measuring higher education institutions’ contributions towards the UN Sustainable Development Goals. Over the past decade, DCU has also been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

Background

The Insight SFI Research Centre for Data Analytics (<http://www.insight-centre.org>) is an SFI funded Research Centre which brings together researchers from University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions, Trinity College Dublin (TCD), University of Limerick (UL), Maynooth University (MU) and Tyndall National Institute. It creates a critical mass of more than 400 researchers from Ireland’s leading ICT clusters to carry out research on a new generation of data analytics technologies in a number of key application domain areas, such as Health and Human Performance, Smart Communities, Internet of Things, Enterprise and Services and Sustainability and Operations.

The €150m Centre is funded by Science Foundation Ireland and a wide range of industry and European Union partners. Insight's research focus encompasses a broad range of data analytics technologies from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. Together, with more than 220 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

Risks associated with travel, such as delays, accidents, criminality, or even death, can have an enormous impact on a business. The global security market is estimated to have an annual turnover in excess of \$66.9B for the US alone. KowRoo's is an EI commercialisation fund that combines analysis of real-time data that is personalised for the user, whilst integrating the risk appetite of the business, and communicating dynamic risk rating results via an app to the user. KowRoo will have a mobile app and desktop user interface, behind which a large volume of historical risk assessments generated from past analyses and real time incidents will be used as inputs to modern AI algorithms to build a real time robotic analyst "KowRoo".

The Role

We are seeking an Analyst Programmer to participate in the design and development of a secure automated risk assessment system for users. In addition, the candidate will be exposed to development of an AI component for the project that will automate the decision making process for lending institutions. The successful candidate for this role will have lead a small team of developers.

Competency from front end to back-end is required for this highly innovative and ground-breaking project.

Duties and Responsibilities

Reporting to the team lead, the Analyst Programmer will:

- Acquire and deploy technical architecture in an agile engineering process within the project, understand the requirement, formulate the design and communicate the architecture to the team and support other team members in architecture development and verify the implementation
- Participate in additional training to attain competency in software engineering processes, as necessary, ensuring a knowledge of new approaches and awareness of the state of the art in the relevant area
- Demonstrate a commitment to quality over expediency in software development
- Engage regularly and effectively with project partners
- Lead a small team of Software Engineers on day to day development
- Lead the agile development of the project
- Identify and populate in dialogue with team members, 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
- Ensure architecture is compliant with existing partner systems and system integration can be facilitated
- Additional duties may be added by the line manager as the role develops, in line with ensuring the project deliverables and outcomes are met

- 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 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.

Qualification and Experience

Minimum Criteria

Candidates will have a degree in an appropriate area or equivalent (NFQ Level 7). Typically, an honours BSc in Computer Science, Software Engineering or a related discipline with strong software and programming skills together with relevant experience in web application development with substantial backend integrations is expected. Candidates will also have 4 years of relevant working experience in software development.

Desirable Criteria

- Familiar with agile development
- 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
- Familiarity with Test Driven Development, Continuous Integration and Continuous Delivery.
- Strong communication skills for documenting workflows, tools, or complex areas of a codebase
- 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