



Research Assistant - Huawei
Insight SFI Research Centre for Data Analytics
Fixed Term Contract up to 12 Months

Overview

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.

The Project

The proposed project is collaborative between the Insight SFI Research Centre for Data Analytics at DCU and the Site Reliability Engineering (SRE) lab at Huawei Ireland Research Centre in Dublin. The overarching goal of the project is to evaluate the scalability of various microservices in the Huawei cloud system with an intention to devise intelligent prediction models and detection algorithms using machine learning and deep learning techniques to effectively assess system performance when cloud-based services go beyond their limits in terms of resource consumption. The developed algorithms, models and tools will be integrated and implemented with links to real-world production system in Huawei to further enhance reliability and scalability of its cloud services.

The Role

This successful research assistant will be working closely with a postdoctoral researcher who will also be recruited for the project. Both researchers will collaborate deeply with the PI and the world-leading experts in the Huawei teams in order to deliver the project in a timely manner.

Duties and Responsibilities

Assist the Principal Investigators (PIs) in:

- Processing cloud data from the industry partner;
- Developing algorithms, machine learning models and other required software tools as part of the project deliverables;
- Building, evaluating and testing prototypes;
- Writing reports, deliverables and presentation slides.
- Participate in Insight Centre activities.
- Carry out technical works with advice and support from the postdoctoral researcher.
- Carry out administrative work associated with the programme of research as necessary.
- Other tasks relevant to successfully implementing the assigned research programme.

Qualifications and Experience

Minimum criteria

The successful individual will have a Primary degree in a related discipline.

In addition to the above it is desirable that the candidate possess a subset of the following skills and experience.

- Excellent written and oral proficiency in English (essential).
- Excellent written and verbal communication and interpersonal skills.
- Proven ability to prioritize workload and work to strict deadlines.
- Ability to work in a team and to take responsibility to contribute to the overall success of the team.
- Strong problem solving abilities.
- Strong programming skills in Bash, Python.
- Hands-on experience in machine learning and deep learning.
- Good knowledge of cloud services, system and architecture (preferable).

Mandatory Training

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

Additional Information

The successful candidates will be offered opportunities for developing their own careers in a number of directions including support for conference/workshop travel, upskilling through Insight's continuous professional development in areas like research ethics and data privacy, student supervision and development and submission of their own research project proposals.