



**Insight Centre for Data Analytics
Artificial Intelligence Postdoctoral Researcher
Fixed term contract – 6 months**

General Information

Dublin City University (www.dcu.ie) is a research-intensive, globally-engaged, dynamic institution that is distinguished by both the quality and impact of its graduates and its focus on the translation of knowledge into societal and economic benefit. DCU prepares its students well for success in life, and in the workplace, by providing a high-quality, rounded education appropriate to the challenges and opportunities of the 21st century.

Through its mission to transform lives and societies through education, research and innovation, DCU acts as an agent of social, cultural and economic progress. As Ireland's University of Enterprise, it is characterized by a focus on innovation and entrepreneurship and a track-record of effective engagement with the enterprise sector. Excellence in its education and research activities has led to its consistent.

Background

The Insight 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), National University of Ireland, Maynooth (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

We are seeking an expert in Artificial Intelligence approaches to work as part of a small team to research, design and test an embedded intelligent anomaly detection system. The artificial intelligence driving the Anomaly detection system will be based on an algorithm utilizing Reproducing Kernel Hilbert Space transforms and Bayesian optimisation.

This project is very much driven by the practical utility of AI on constrained power and computation devices and is not a pure research project.

Main Duties and Responsibilities

Reporting to his/her Principal Investigator(s) the Postdoctoral Researcher will:

- Research and model mathematical approaches to Probability density estimation using Hilbert Spaces.
- Implement approaches in Matlab
- Optimise algorithms using reduced word length constraints
- Produce top quality journal and conference publications, in collaboration with the PIs.
- Participate in Insight Centre activities, including industry showcases, annual reviews and industry and agency visits to the Insight labs.
- Assist with presentation and documentation of systems for industry sponsors.
- Other tasks relevant to successfully implementing the assigned research programme.
- Carry out administrative work associated with the programme of research as necessary

Minimum Criteria

- The ideal candidate possess the following:
- A PhD in Computer Science, Engineering or a related discipline;
- The ability to demonstrate deep mathematical understanding of AI approaches as well as understanding of how to build and demonstrate the approaches for real live testing.

Skills

- 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.

Desirable technical skills

- Coding skills (ideally being able to code in C)
- Work well in a group or alone
- Skills in functional analysis
- Statistical processes and Bayesian optimisation
- Non stationary signal processing
- Matlab familiarity

Mandatory Training

The postholder will be required to undertake the following mandatory compliance training: Orientation, Health & Safety and Data Protection (GDPR). 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.

Salary: Post-doctoral Researcher Level 1, point 1-3 €37,874 – €40,220

*Appointment will be commensurate with qualifications and experience

Closing date: 17 September 2019

Application Procedure

Informal enquiries to: Prof. Tomas Ward, Insight Centre for Data Analytics, Dublin City University

E-mail: tomas.ward@dcu.ie

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

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.

Please clearly state the role that you are applying for in your application and email subject line: Job Ref #RF1271 Artificial Intelligence Postdoctoral Researcher.

Applications and CV should be submitted by email to hr.applications@dcu.ie or by post to the Human Resources Department, Dublin City University, Dublin 9.

Dublin City University is an equal opportunities employer