Research Centre: Insight SFI Research Centre for Data Analytics

Post Title: Postdoctoral Researcher in Image understanding using machine learning

Level on Framework: Level 1

Post Duration: Fixed Term Contract up to 48 months

As part of this role the researcher will be required to participate in the DCU Research Career Framework. This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path. The role may include teaching duties to assist with module delivery.

Insight SFI Research Centre for Data Analytics

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 and Role**

The project is a collaborative project between the Insight SFI Research Centre for Data Analytics and Xperi Fotonation which aims to solve problems in the area of Machine Learning and image understanding. The successful candidate will split their time (50:50) between the Insight Centre, DCU and the Xperi Fotonation offices in Galway. Prioritized research goals will be aligned with some of the following topics: advancements in image enhancement using ML, learning from limited training data, joint video and audio analytics using ML, low power ML and artificial intelligence algorithms on the edge, adversarial attacks on recognition systems, new approaches to visual saliency prediction and applications, among others.

**Principle Duties and Responsibilities**

Please refer to the job description for duties and responsibilities associated with this post.

**Qualifications, Skills and Experience Required**

The ideal candidate will have a PhD in Computer Science, Engineering or a related discipline with strong software and programming skills and relevant experience in computer vision, deep learning, or collaborative filtering.

In addition, ideally the candidate should possess the following skills;

- Programming and software development: especially in Python and C/C++, and experience in numerical and scientific computing in Python or MATLAB.
- Mathematical skills: advanced linear algebra, probability and statistics, multivariate calculus, and mathematical optimization.
- Theoretical and applied machine learning: especially deep learning, and knowledge of unsupervised or semi-supervised methods in deep learning.
- Software frameworks for deep learning: e.g. PyTorch or Tensorflow
- Computer vision theory and algorithms.
- Various operating systems, especially GNU/Linux.
- Excellent written and oral proficiency in English (essential).
- Excellent written and verbal communication skills.
- Proven ability to actively prioritize workload and confident to work to strict deadlines.
- Ability to work in a team and also independently contribute to the overall success of the team.
- Strong problem solving abilities.

**Mandatory Training**

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

**Salary Scale:** €37,874 - €49,048
Appointment will be commensurate with qualifications and experience

Closing date: 29th of June 2020

Candidates will be assessed on the following competencies:

Discipline knowledge and Research skills – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline

Understanding the Research Environment – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications

Communicating Research – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students

Managing & Leadership skills - Demonstrates the potential to manage a research project including the supervision of undergraduate students

Informal Enquiries in relation to this role should be directed to:

Professor Noel O'Connor, CEO Insight Centre, Dublin City University.
Phone: +353 (01) 7005078 Email: noel.oconnor@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

Applications should be submitted by e-mail with your completed application form to hr.applications@dcu.ie

Please clearly state the role that you are applying for in your application and email subject line: Job Ref #RF1368 Postdoctoral Researcher in Image understanding using machine learning

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.