



Post title: Postdoctoral Researcher, Deep Learning and Computer Vision
Level on Framework: Level 1
Post duration 24 months

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

The project involves creating novel semi-supervised machine learning methods for applications in computer vision.

Main Duties and Responsibilities

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

- Conduct a programme of research in computer vision and deep learning with an emphasis on semi-supervised learning, self-supervised learning, and learning with weak and noisy annotation.
- Provide support and advice to PhD students working on similar topics.
- Assist the Principal Investigators (PIs) in overseeing development for various research projects.
- Contribute to the design and implementation of prototype demonstrators.
- Produce top-quality journal and conference publications, in collaboration with students and 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 demonstrator systems for industry sponsors.
- Assist and contribute to teaching activities in the School.
- Other tasks relevant to successfully implementing the assigned research programme.
- Carry out administrative work associated with the programme of research as necessary

Below are some pointers to examples of technologies that are used in our projects, to

indicate the type of experience we require. The successful candidate should demonstrate strong competence in some of these technologies:

- Proficiency in Python and C/C++.
- Experience working with Linux and shell scripting/automation.
- Experience with machine learning and deep learning algorithms, especially with respect to computer vision applications.
- Experience with a deep learning framework, especially PyTorch or Tensorflow.
- Experience with modern techniques and implementations in computer vision.
- Experience with numerical and scientific computation (via Python/MATLAB/R/etc.)

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 deadlines.
- Ability to work in a team and to take responsibility for the success of the team.
- A high-level of mathematical proficiency (linear algebra, multivariable calculus, probability).
- Strong problem-solving abilities.

Minimum Criteria

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.

Research Career Framework

As part of this role you will be required to participate in the DCU Research Career Framework <http://dcu.ie/hr/ResearchersFramework/index.shtml>. This framework is designed to provide significant professional development opportunities to researchers and offer the best opportunities in terms of a wider career path.

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 Scale: * €37,223 – €48,205 per annum

*Appointment will be commensurate with qualifications and experience

Closing date: Wednesday, 24th July 2019

Candidates will be assessed on the following competencies:

- **Discipline specific 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 and Leadership skills** - Demonstrates the potential to manage a research projects including the supervision of undergraduate students.

Application Procedure

Informal enquiries to:

Dr. Kevin McGuinness, School of Electronic Engineering, Insight Centre for Data Analytics,
Dublin City University

E-mail: kevin.mcguinness@dcu.ie

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

Application forms are available from the DCU Current Vacancies (open Competitions) website at <http://www.dcu.ie/vacancies/current.shtml> and from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0) 1 7005149.

Please clearly state in the email subject line and in your application the role you are applying for: #RF1246 Postdoctoral Researcher, Deep Learning and Computer Vision

Applications should be submitted by email to hr.applications@dcu.ie or by Fax: +353 (0)1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: hr.applications@dcu.ie

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