

<b>Research Centre</b>	Insight Centre for Data Analytics
<b>Post title</b>	Postdoctoral Researcher
<b>Level on Framework</b>	Level 1
<b>Post duration</b>	Fixed term up to 29 February 2020

## Research Career Framework

As part of this role the researcher 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.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

An exciting research position in a very innovative, applied research initiative embedded in Dublin City University – Ireland's University of Enterprise. FPC@DCU – Ireland's first Fraunhofer initiative - engineers microfluidics-enabled, next-generation for the benefit of people and societies in collaboration with the Fraunhofer Institute for Production Technology (IPT) in Germany. Common fields of application are in-vitro ("Point-of-Care") diagnostics, pharma, life-science research, agrifood and environmental monitoring. FPC@DCU therefore operates at the challenging crossroads of microsystems engineering and the life sciences.

## Insight

The Insight Centre for Data Analytics (<http://www.insight-centre.org>) is a joint initiative between researchers at University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions. It brings together a critical mass of more than 350 researchers from Ireland's leading ICT centres to develop a new generation of data analytics technologies in a number of key application areas.

The €88m Centre is funded by Science Foundation Ireland and a wide range of industry 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 30 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

## Background & Role

Insight has available a postdoctoral researcher position on a fixed-term contract basis for 12 months. The postdoctoral researcher will be responsible for investigating and reporting on new technologies for data analysis and integration in the context of a collaborative project.

The post is associated with the EU funded ASGARD (Analysis System for Gathered Raw Data) project ([www.asgard-project.eu/](http://www.asgard-project.eu/)) that is addressing the challenges of exploiting big data (data analytics, data mining, visual analytics) and the effective use of associated technologies for the benefit of Law Enforcement Agencies, with a focus on cyber-offenses.

The role of DCU within the project is to apply our existing expertise in data management and video analytics to develop, package and evaluate tools for use in the ASGARD project. We are also active participants in the project “hackathons” where developers and law enforcement partners come together to trial and evaluate the ASGARD tools.

The candidate will join a team of researchers working on this project and others in the media analytics group at the Insight Centre for Data Analytics at DCU. This role will be responsible for investigating and reporting on new technologies for data analysis and integration in the context of this collaborative project.

## Principle Duties and Responsibilities

- Conduct research activities, including planning, organising, conducting, and communicating research studies within the overall scope of the project, under the supervision and direction of the Principal Investigator.
- Coordinate and perform a variety of independent tasks and team activities involved in the collection, analysis, documentation and some interpretation of information/results.
- Present information on research progress and outcomes to others responsible for the research project.
- Conduct literature and database searches and interpret and present the findings of the literature searches as appropriate.
- Analyse and interpret the results of own research.
- Write up results from own research activity (e.g. as project report) for review by PIs which could include preparing technical reports, conclusions and recommendations.
- Publication of findings.
- Provide input into the research project’s dissemination, in whatever form (report, papers, chapters, book) as directed by the PI/project leader and research supervisor.
- Present on research progress and outcomes, e.g. to bodies supervising research; steering groups; other team members, as agreed with the PI/project leader.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary.
- Assist in identifying and developing future research and funding initiatives.
- Supervise and assist undergraduate students working in this area with their research

**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:**

- Prior experience of applying and extending the existing state of the art in deep learning for computer vision

- Knowledge of one or more of: Python, C, C++, Java
- Experience working with UNIX, Linux, OSX or Windows operating systems.
- Experience in developing both supervised and unsupervised machine learning strategies.
- Experience in one or more machine-learning frameworks, such as scikit-learn, PyTorch, Tensorflow, Theano, Keras, Lasagne etc.
- Experience of modern techniques and implementations in machine-learning and data visualization.
- Experience in repository management (Git or similar) and containerization methods (eg. Docker).
- Experience implementing web frameworks or REST APIs.

## **Skills**

- Excellent written and oral proficiency in English (essential)
- Excellent written and verbal communication and interpersonal skills.
- Proven ability to prioritise 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.

## **Minimum Criteria**

The candidate will have a PhD in Computer Science, Engineering or a related discipline.

## **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.

## **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)
- 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)
- Understanding the Research Environment (demonstrates an awareness of the research environment( e.g. funding bodies) and takes responsibility for how their research is conducted

**Salary Scale:** \* €36,854 – €47,728

*\*Appointment will be commensurate with qualifications and experience will be made on the appropriate point of the salary scale, in line with current Government pay policy*

**Closing date:** 27<sup>th</sup> September 2018

**Informal enquiries to:** Dr. Suzanne Little +353-1-7006052, [suzanne.little@dcu.ie](mailto:suzanne.little@dcu.ie).

## **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 #991 Post-Doctoral Researcher, Insight**

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

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