

<b>Research Centre</b>	Insight Centre for Data Analytics
<b>Post title</b>	Research Assistant
<b>Post duration</b>	Fixed Term contract up to 10 Months

## Background

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 centers 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.

## The Project

CCTV has become the common infrastructure in big premises. Besides video surveillance there are more features from CCTV cameras can be offered with Artificial Intelligence, such as Crowd Activity Recognition, Crowd Demographic Analysis, Detection and Tracking of Groups within Crowd, etc. We are HiData from Insight DCU, who aims to be the 1st company providing dense crowds analysis services.

The specific project for this role, involves the development of novel strategies for dense crowd video monitoring and surveillance, using video analytics and deep learning approaches for computer vision.

## Principle Duties and Responsibilities

- Reporting to his/her Principal Investigator the Research Assistant will:
- Support the research group in system development for a project
- Contribute to the design and implementation of the projects prototype demonstrators
- Support the overall the research programme in close collaboration with other project partners and the DCU-based team
- Presentation and documentation of the system and demonstrators for partners.
- Other tasks relevant to successfully implementing the project's research programme.
- Carry out administrative work associated with the programme of research as necessary

## **Minimum Criteria**

You must hold a primary degree (NFQ Level 8) in a relevant discipline and should have at least have 1 year of relevant experience.

## **Mandatory Skills:**

### Computing skills:

- Good general software engineering skills (OOP, functional programming)
- Numerical and scientific computing experience
- Knowledge of algorithms and complexity
- Experience with the Python programming language
- Experience with numerical computing using numpy and scipy
- Experience with C/C++
- Familiarity with MATLAB
- Experience in Unix environments (Linux, shells, GNU tools, etc.)

### Mathematical skills:

- Linear algebra
- Multivariate calculus
- Probability and statistics
- Mathematical optimization

## **Desirable Skills:**

Preferably experience in one or more of the following:

- Machine learning
- Computer vision
- Image processing
- Data analytics
- Data visualization
- Deep learning
- Multimedia
- GPU computing
- HTML/CSS/Javascript

### Other:

- Good communication skills
- English writing skills

**Start Date:** February-March 2019

**Salary:** \*€21,891.00 – 34612.00 pa

\*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.

**Informal Enquiries:** Dr. Leonardo Gualano [leonardo.gualano@insight-centre.org](mailto:leonardo.gualano@insight-centre.org)

*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://www4.dcu.ie/hr/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0)1 700 5149; Fax: +353 (0)1 700 5500 Email: [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

**Please clearly state the role that you are applying for in your application and email subject line: Job Ref1067 Research Assistant, Insight**

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

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