Research Centre:	Insight SFI Research Centre for Data Analytics
Post Title:	Postdoctoral Researcher, Biomedical Information
Level on Framework:	Level 1
Post Duration:	Fixed term contract up to Two Years in Duration

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.

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 you can advance your academic career.

The Project:

The post is an opportunity to bring data analytics and information modelling skills to a challenging biomedical application between the Insight SFI Centre for Data Analytics, the DCU Centre for Medical Engineering Research (https://www.dcu.ie/medeng) and Biodesign Europe (https://biodesign.asu.edu/Research/Biodesign-Europe/overview) through the H2020 GIOTTO project (https://www.giottoproject.eu/). The overall objective of GIOTTO is to implement solutions and tools to enhance active ageing through development of devices and approaches to treat osteoporotic fractures using smart nanomaterials thereby mitigating the economic burden to health

systems and producing benefits for the elderly.

Area of research: Data mining, knowledge modelling, data integration, ontologies and standards, information retrieval and big data search, data (especially multimedia) analytics.

The Role:

This position will provide a unique opportunity to work on a collaborative, cross-domain project within three high quality research centres (i.e [Insight Centre for Data Analytics](#), [Medical Engineering Research Centre](#) and [Biodesign Europe](#) through a significant European funded research project. The successful candidate will be responsible for the data management and integration challenges of a wide range of multi-modal, multi-source data generated through the design, manufacture and experimental evaluation of biomedical and mechanical components for treating osteoporosis. This will involve working with industry and academic partners to understand and model processes and implement software to work with APIs, ingest data in different formats, create a unified data collection and query and perform data analytics using the resulting system. Implementation, experimentation, evaluation and publication of results will form an integral part of the position.

Principle Duties and Responsibilities:
Please the job description for a full list of duties and responsibilities.

Minimum Criteria:
The successful candidate must hold a PhD in Computing, Electronic Engineering, Mathematics or similar.

In addition, it is desirable that the candidate has a subset of the following skills:

- Computer programming and software development experience.
- Experience with data analytics, information retrieval and associated evaluation methodologies.
- Strong writing and communication skills including a track record of quality academic publications.
- Experience with databases; metadata management; information modelling; integrated knowledge retrieval systems and/or ontologies especially relating to process management or manufacturing.
- Experience in collaborative research especially with industry partners.
- Familiarity with Internet-of-Things architectures and data gathering from multiple devices.
- Implementation of a project using data mining, knowledge modelling, machine learning, artificial intelligence, computer vision or similar technologies and evaluating the performance of the tool.
- Experience with some of the following libraries or technologies would be advantageous: graph or NoSQL databases; RDF/XML; ISO-TAB-Nano; Protege or similar.

Mandatory Training:

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

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

Salary Scale: Post-Doctoral Researcher IUA Scale* - €38,631 - €50,030

Appointments will be commensurate with qualifications and experience and will be made on the appropriate point of the salary scales, in line with current Government pay policy.

Closing date: 10th March 2021

Informal enquiries to: Dr Suzanne Little, Insight SFI Centre for Data Analytics, School of Computing, DCU, Dublin 9
E-mail: suzanne.little@dcu.ie Ph: 01-7006052

Application Procedure:
Application forms are available from the DCU Current Vacancies website at https://www.dcu.ie/hr/vacancies/current.shtml.

Applications must be submitted by e-mail to hr.applications@dcu.ie.

Please clearly state the role that you are applying for in your application and email subject line: Job Ref #RF1477 Postdoctoral Researcher – Biomedical Information

Dublin City University is an equal opportunities employer.

In line with the Employment Equality Acts 1998 – 2015, the University is committed to equality of treatment for all those who engage with its recruitment, selection and appointment processes.

*The University's Athena SWAN Bronze Award signifies the University's **commitment to promoting gender equality and addressing any gender pay gaps.** Information on a range of university policies aimed at creating a supportive and flexible work environment are available in the DCU Policy Starter Packs*