



SFI RESEARCH CENTRE FOR DATA ANALYTICS



**Insight SFI Research Centre for Data Analytics
2003 - PhD position, in Dialogue Systems
Up to 4 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.

Area of research: Open-domain Dialogue Systems

The task of open-domain dialogue systems or chatbots is to speak to human users in a natural and engaging way on a topic chosen by the human and this subsequently poses one of the greatest challenges in AI. The proposed PhD project involves developing and improving state-of-the-art in open-domain dialogue systems and includes two distinct strands. Firstly, open-domain dialogue system development is greatly hampered by a lack of methods of evaluating systems that provide insight into how systems can be improved. For example, the recent Alexa Grand challenge describe evaluation of open-domain dialogue systems as "AI Complete", or a truly human-intelligence equivalent problem (Khatri et al., 2018). The project will look at developing methods of human evaluation or semi-automatic human evaluation methods that can be carried out on a large enough scale to provide accurate insights into how existing systems should be improved. The second strand of the project will then use this insight to further improve an existing chatbot. The ideal candidate should have a keen interest in artificial intelligence, programming, machine learning and natural language processing.

Eligibility:

MSc or BSc in Computer Science/Natural Language Processing or other relevant discipline is expected but candidates with other backgrounds will be considered on a case-by-case basis.

English language requirements for non-native speakers of English is available here:

<https://www.dcu.ie/registry/english.shtml>

Essential Skills:

- Excellent Programming Skills
- Interest in Machine Learning
- Natural Language Processing

Desirable skills:

- Excellent writing ability
- Statistics

Stipend:

This is a 4 year fully funded structured PhD position with a stipend of €18,500 per year (tax-free, tuition fees paid).

Application Process

All expressions of interest, to include

1. CV including relevant publications
2. Contact details of 2 referees
3. 1 page cover letter detailing relevant experience and interest in this specific position (please check the list of essential and desirable skills in preparing this letter)

in PDF only, are to be submitted by email to: Assoc. Prof Yvette Graham - yvette.graham@dcu.ie

Please clearly state the role that you are applying for in your application and email subject line:

2003 - PhD position, Open-domain Dialogue Systems

Application End Date: 12th March 2020. Interviews will be carried out as soon as suitable candidates are identified.

Start Date: The position commences in April 2020 or when a suitably qualified candidate becomes available.

W: insight-centre.org