Insight Centre for Data Analytics
PhD Position, Machine Learning for Human Movement
Analysis in Sport
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: Machine Learning for Human Movement Analysis in Sport

This PhD position represents an opportunity for a researcher interested in human performance in sports to learn machine learning techniques and apply these for the purposes of better understanding of human performance. The work is led by a collaboration between Prof Tomas Ward, Chair of Data Analytics at Dublin City University and Prof Brian Caulfield, Prof of Physiotherapy at University College Dublin. The intended application areas are open and include a range of interests of the supervisor team spanning strength and conditioning, sports and rehabilitation. There is a co-creation opportunity for the PhD candidate to develop a research topic through dialogue with Profs Ward and Caulfield. Working in collaboration with the movement scientists at University College Dublin, the successful PhD candidate will likely focus their efforts on the development of appropriate signal processing pipelines and feature engineering approaches for the purposes of improved human performance measurement. Both wearable and camera based solutions can be included. The provision of suitable feedback to improve form, performance and health also fall under the scope of interest for this PhD. Taken together there is ample opportunity for an ambitious student to pursue their research passion in the area of human movement science using methods from machine learning and signal processing.

Eligibility:

An MEng in Computer/Electronic Engineering or a BSc or MSc Degree in Computer Science or Mathematics 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:
- Good mathematical skills
- Excellent communication skills, verbal and written (English)
- Computational modelling skills

Desirable skills:
- An interest in working with people from other disciplines
- R, Python
- Bayesian 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:

Informal enquiries about this position can be made to: tomas.ward@dcu.ie

Application Procedure

All expressions of interest, to include
1. CV including relevant publications and contact details of 2 referees
2. 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)
3. A copy of your undergraduate/postgraduate thesis report

in PDF only, are to be submitted by email to: Prof Tomás Ward - tomas.ward@dcu.ie

Please clearly state the role that you are applying for in your application and email subject line: 1906 - PhD position, Machine Learning for Human Movement Analysis in Sport

Interviews will be carried out Interviews will be carried out as soon as suitable candidates are identified.

Application End Date: 16th December 2019

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

W: insight-centre.org