



## Job Description

College/Management Unit	UCD College of Science
School/Unit	UCD School of Computer Science / CeADAR
Post Title & Subject Area	<b>Senior Research Data Scientist</b>
Project	<b>Centre for Applied Artificial Intelligence (CeADAR)</b>
Post Duration	Specified Purpose post (Est. circa 11mths – initially)
Reports to	Head of the Innovation and Development & Centre Director
HR Reference No.	015543
HR Administrator	Julie Breen

### Position Summary

Applications are invited for the position of Senior Research Data Scientist in CeADAR - Ireland's Centre for Applied Data Analytics & Artificial Intelligence.

CeADAR is seeking an experienced individual who has a demonstrated successful track record in data science in research and industry settings (>6 years). Individuals in this role are expected to have proven experience researching and applying artificial intelligence, machine learning, computational statistics, and statistics to specific problems, particularly in areas such as deep learning, graphical models, reinforcement learning, computer perception, natural language processing and data representation. The ideal candidate will have a keen interest in contributing to the development of proof of concepts to allow companies to leverage the benefits of state-of-the-art AI algorithms.

We are very passionate about applying ML algorithms and have productised everything from classic supervised models to cutting-edge unsupervised clustering algorithms to novel applications of transformer neural networks. We test and measure the real customer impact of each model we deploy.

This is an opportunity to work on a number of diverse and exciting projects in the area of data science with real application to a variety of verticals in the industry sector both at national and EU level, including the start-up ecosystem. The individual will be part of CeADAR's Innovation & Development Group, participating in projects demanding skills in applied data science for the development of machine learning solutions for industry.

CeADAR is based in University College Dublin and is funded by the government to help the companies embrace AI. CeADAR is also the designated European Digital Innovation Hub for AI in Ireland, and thus works extensively in Europe. The applied research at CeADAR covers broad aspects of AI and data analytics using advanced machine learning to deal with structured and unstructured data coming from many different sectors. This is an exciting opportunity to be involved in this strategic and nationally important area of AI and Analytics where CeADAR is shaping the strategy at national and EU level.

#### **Equality, Diversity and Inclusion:**

UCD is committed to creating an inclusive environment where diversity is celebrated, and everyone is afforded equality of opportunity. To that end the university adheres to a range of equality, diversity and inclusion policies. We encourage applicants to consult those policies here <https://www.ucd.ie/equality/>. We welcome applications from everyone, including those who identify with any of the protected characteristics that are set out in our Equality, Diversity and Inclusion policy.

**Salary range:** €66,000 - €80,000 per annum

Appointment on the above range will be dependent on qualifications and experience

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## Principal Duties and Responsibilities

### Technical

- Technical leadership and oversight of research projects in data science (machine learning) in collaboration with other senior data scientists and software engineers in the team and companies, including European Horizon projects (RIA, IA) and translations research
- Hands-on research and development activities as required, including devising technical solutions, implementing software and evaluating proposed solutions in the field of data analytics in areas such as computer vision, natural language processing, multimodal time series, etc.
- Continuous learning and application of the latest techniques and libraries in machine learning to real problems
- Dissemination of research outputs at industry and research-oriented events
- Authorship and Reviewing of technical papers, project reports, white papers, state-of-the-art reports and related documents

### Management/Organisational

- Management and mentoring of data scientists
- Management of research projects with company partners, especially EU Horizon projects
- Scoping of research projects for industry partners
- Preparation of funding proposals at national and EU level

### Business Development

- Business development activities when required
- Communication of data driven insights to non-technical audiences
- Involvement in external industry, academic and government groups and fora with a view to publicising and promoting the activities of the centre

## **Selection Criteria**

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

### Mandatory

- PhD in Computer Science or relevant numerical field
- Minimum of 6 years' experience in research and applied data science (machine learning)
- Expert knowledge of data analytics methods and experience with traditional machine learning and advanced deep learning technologies using frameworks such as Keras, TensorFlow, Pytorch
- Research expertise in advanced machine learning, including traditional and cutting-edge deep learning algorithms to process both structured and unstructured to solve problems with real data; experience in Computer Vision and NLP.
- Strong Software development skills using Python or similar languages and strong database skills
- Experience working with Linux and in the use of docker containers and API development.
- Ability to generate new research ideas and build upon existing ideas to generate unique concepts
- A willingness to learn and explore new tech and data science tools
- Experience working closely with academic, research and industry partners on machine learning projects, particularly developing project specifications and delivering to deadlines on multiple projects simultaneously, both at national level and EU level
- Experience managing data science project and small data scientist teams

- Experience attracting EU funding – forming consortia, writing proposals
- Experience in leading and managing tasks and WPs in EU Horizon projects (RIA, IA)
- Excellent communication skills with demonstrated experience of writing technical reports
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

#### Desirable

- Experience of working in/with industry in a research data scientist role
- Experience with back-end and front-end web development
- Experience in the use of cloud IaaS systems (e.g. AWS)

## Further Information for Candidates

### **About CeADAR**

is funded by Enterprise Ireland and IDA under its Technology Centres programme and is led and driven by a consortium of companies from the data analytics industry, both national and international. It brings together Irish researchers, scientists and engineers in data analytics to address research challenges in the area as identified by SMEs and MNCs operating in Ireland. The research agenda is driven by the requirements of the industry membership.

### **Supplementary information**

The Centre:	<a href="https://www.ceadar.ie">https://www.ceadar.ie</a>
The University:	<a href="http://www.ucd.ie/aboutucd.htm">http://www.ucd.ie/aboutucd.htm</a>
UCD College of Science:	<a href="http://www.ucd.ie/science/">http://www.ucd.ie/science/</a>
UCD School of Computer Science:	<a href="http://www.csi.ucd.ie/">http://www.csi.ucd.ie/</a>
Enterprise Ireland Technology Centres:	<a href="http://www.enterprise-ireland.com/en/Research-Innovation/Companies/Collaborate-with-companies-research-institutes/Technology-Centres.html">http://www.enterprise-ireland.com/en/Research-Innovation/Companies/Collaborate-with-companies-research-institutes/Technology-Centres.html</a>

### **Relocation Expenses**

Will not apply

### **Garda Vetting Required**

No.

### **Informal Enquiries ONLY to:**

Name:	Dr. Ricardo Simon Carbajo
Title:	Head of Innovation & Development
Email address:	<a href="mailto:ricardo.simoncarbajo@ucd.ie">ricardo.simoncarbajo@ucd.ie</a>
Telephone:	N/A

### ***Eligibility to compete and certain restrictions on eligibility***

<b>Incentivised Scheme for Early Retirement (ISER):</b>	It is a condition of the Incentivised Scheme for Early Retirement (ISER) as set out in Department of Finance Circular 12/09 that retirees, under that Scheme, are debarred from applying for another position in the same employment or the same sector. Therefore, such retirees may not apply for this position
<b>Department of Health and</b>	The Department of Health Circular 7/2010 dated 1 November 2010 introduced a Targeted Voluntary Early Retirement (VER) Scheme and Voluntary Redundancy Schemes (VRS). It is a condition of the VER scheme that persons availing of the

<p><b>Children Circular (7/2010):</b></p>	<p>scheme will not be eligible for re-employment in the public health sector or in the wider public service or in a body wholly or mainly funded from public moneys. The same prohibition on re-employment applies under the VRS, except that the prohibition is for a period of 7 years, after which time any re-employment will require the approval of the Minister for Public Expenditure and Reform. People who availed of either of these schemes are not eligible to complete in this competition.</p>
<p><b>Collective Agreement - Redundancy Payments to Public Servants:</b></p>	<p>The Department of Public Expenditure and Reform letter dated 28th June 2012 to Personnel Officers introduced, with effect from 1st June 2012, a Collective Agreement which had been reached between the Department of Public Expenditure and Reform and the Public Services Committee of the ICTU in relation to ex-gratia Redundancy Payments to Public Servants. It is a condition of the Collective Agreement that persons availing of the agreement will not be eligible for re-employment in the public service by any public service body (as defined by the Financial Emergency Measures in the Public Interest Acts 2009 – 2011) for a period of 2 years from termination of the employment. Thereafter the consent of the Minister for Public Expenditure and Reform will be required prior to re-employment. People who availed of this scheme and who may be successful in this competition will have to prove their eligibility (expiry of period of non-eligibility) and the Minister’s consent will have to be secured prior to employment by any public service body.</p>
<p><b>Declaration:</b></p>	<p>Applicants will be required to sign a Pre-Employment Declaration to confirm whether they have previously availed of a public service scheme of incentivised early retirement and/or the collective agreement outlined above. The above represents the main schemes and agreements restricting a candidate’s right to be re-employed in the public service. However it is not intended to be an exhaustive list and candidates should declare details of any other exit mechanism they have availed of which restricts their right to be re-employed in the public service. Applicants will also be required to declare any entitlements to a Public Service pension benefit (in payment or preserved) from any other Public Service employment and/or where they have received a payment-in-lieu in respect of service in any Public Service employment.</p>
<p><b>Superannuation and Retirement:</b></p>	<p>The successful candidate will be offered the appropriate superannuation terms and conditions as prevailing in the University, at the time of being offered an appointment. In general, and except for candidates who have worked in a pensionable (non-single scheme terms) public service job in the 26 weeks prior to appointment (see paragraph d below), this means being offered an appointment based on membership of the Single Public Service Pension Scheme (“Single Scheme”).</p> <p>Key provisions attaching to membership of the Single Scheme are as follows:</p>
<p><i>a. Pensionable Age</i> - The minimum age at which pension is payable is 66 in line with State Pension age changes.</p> <p><i>b. Retirement Age</i> - Scheme members must retire at the age of 70.</p> <p><i>c. Pension Abatement:</i></p> <ul style="list-style-type: none"> <li>▪ If the appointee was previously employed in the Civil Service or in the Public Service please note that the Public Service Pensions (Single Scheme and Other Provisions) Act 2012 includes a provision which extends abatement of pension for all Civil and Public Servants who are re-employed where a Public Service pension is in payment. This provision to apply abatement across the wider public service came into effect on 1 November 2012. This may have pension implications for any person appointed to this position who is currently in receipt of a Civil or Public Service pension or has a preserved Civil or Public Service pension which will come into payment during his/her employment in this position.</li> </ul>	

- Department of Education and Skills Early Retirement Scheme for Teachers Circular 102/2007

The Department of Education and Skills introduced an Early Retirement Scheme for Teachers. It is a condition of the Early Retirement Scheme that with the exception of the situations set out in paragraphs 10.2 and 10.3 of the relevant circular documentation, and with those exceptions only, if a teacher accepts early retirement under Strands 1, 2 or 3 of this scheme and is subsequently employed in any capacity in any area of the public sector, payment of pension to that person under the scheme will immediately cease. Pension payments will, however, be resumed on the ceasing of such employment or on the person's 60th birthday, whichever is the later, but on resumption, the pension will be based on the person's actual reckonable service as a teacher (i.e. the added years previously granted will not be taken into account in the calculation of the pension payment).

- Ill-Health-Retirement

Please note that where an individual has retired from a Civil/Public Service body on the grounds of ill-health his/her pension from that employment may be subject to review in accordance with the rules of ill-health retirement within the pension scheme of that employment.

*d. Prior Public Servant* - While the default pension terms, as set out in the preceding paragraphs, consist of Single Scheme membership, this may not apply to certain appointees. Full details of the conditions governing whether or not a public servant is a Single Scheme member are given in the Public Service Pensions (Single Scheme and other Provisions) Act 2012. However the key exception case (in the context of this competition and generally) is that a successful candidate who has worked in a pensionable (non-single scheme terms) capacity in the public service within 26 weeks of taking up appointment, would in general not become a member of the Single Scheme. In this case such a candidate would instead be offered membership of the UCD Pension Scheme. This would mean that the abatement provisions at (c) above would apply, and in addition there are implications in respect of pension accrual as outlined below:

*e. Pension Accrual* - A 40-year limit on total service that can be counted towards pension where a person has been a member of more than one existing public service pension scheme would apply. This 40-year limit, which is provided for in the Public Service Pensions (Single Scheme and other Provisions) Act 2012 came into effect on 28 July 2012. This may have implications for any appointee who has acquired pension rights in a previous public service employment.

*f. Pension-Related Deduction* - This appointment is subject to the pension-related deduction in accordance with the Financial Emergency Measure in the Public Interest Act 2009.

For further information in relation to the Single Public Service Pension Scheme for Public Servants please see the following website: <http://www.per.gov.ie/pensions>.