Candidate Brief for the position of:

Data Scientist
(Post-Doctoral Researcher)
N-Light Project

Fixed term specified purpose for up to 5 years
with initial funding for 12 months

Reference: 365a/2023

Recruiting Difference; Reflecting Diversity

Infinite Possibilities
TU Dublin at a glance

The new University – formed by the integration of Dublin Institute of Technology (DIT), Institute of Technology Blanchardstown (ITB) and Institute of Technology Tallaght (ITT) into a single organisation.

- Ireland’s largest university with over 28,000 Students
- Over 3,000 International Students
- Over 3,000 staff members of academic, administrative and support staff
- Annual budget circa €200 Million
- Only University in Ireland to offer programmes from Level 6 to Level 10 on the national qualifications framework
- Over 150 Sports & Student Societies
- Over 1,000 Research Community
- 3 Incubation Centres

For further detail, please see [http://www.tudublin.ie/](http://www.tudublin.ie/).
TU Dublin – A New University for A Changing Ireland

Deeply embedded in our region, TU Dublin has campuses in Dublin City Centre, in Blanchardstown and in Tallaght, and, through our major infrastructural development plan, we are currently investing over €500 million in new, state-of-the-art, technology-enabled facilities to enhance our students’ experience.

A leader in STEM disciplines, TU Dublin also supports the largest cohorts of students of business, media, culinary arts, and the creative and performing arts. We are passionate about life-long learning and, as the largest provider of part-time education, we make an important contribution to the economic life of Ireland, enabling capacity building for the future.

Our distinguished researchers and innovators are pioneers in science and technology discovery; play active roles in informing policy and standards; and contribute to the creative life of Ireland. Our award-winning technology transfer and business incubation activity have delivered over 400 new sustainable businesses with an economic value of almost €700 million.

With an international outlook, we welcome students and staff from around the world while our strong international partnerships provide opportunities for student and staff exchange programmes, major cross-collaboration research projects, and employment opportunities. We are immensely proud of our network of 100,000+ TU Dublin graduates who are making their careers here in Ireland and in 70 countries worldwide.

The Opportunity:
At TU Dublin, we have begun an exciting journey towards 2030 and we invite you to join us so that we can create a better world together.

We are in the midst of a technological era that is entirely disruptive. The pace at which technology, society and world economies are evolving has never been faster. We know that the future for our students, graduates and staff will be very different to that of today. So too, higher education must evolve and advance, to support our people and communities, to be truly relevant, and to deliver real impact.

Our challenge is to prepare our graduates to be well rounded, independent thinkers and lifelong learners with the aptitude to adapt to this changing world and to roles that do not currently exist.

In developing our TU Dublin strategy and in the course of our conversations with over 2,500 stakeholders, we viewed the challenges facing us through the lens of the UN Sustainability Goals (SDGs). Some clear areas of focus and shared concerns began to emerge. This has resulted in shaping our plan to tackle our task through three interrelated themes - People, Planet, and Partnership.
Underpinned by the key SDG goal of ‘Quality Education’, these three pillars will inform our approach to educational, research and engagement practices, ensuring that TU Dublin delivers real change, innovation and impact for society. We will create a seamless network of learning, linking with partners around the world to enhance our path of discovery.

Read more about our Strategic Intent to 2030.

**Challenges:**
TU Dublin is currently undergoing a significant change management to redesign our organisation to ensure the successful delivery of our Strategic Intent. In tandem with this, a significant campaign of external stakeholder engagement is required to introduce TU Dublin to a wide range of audiences. This must include industry and policy-makers; alumni and prospective students; state bodies and not-for-profit NGO’s; as well as academia in Ireland and globally. It must also include the wider Irish public. The objective must be to create an understanding of what is now a new University model in Ireland, but one that has produced exemplary Technological Universities throughout Europe, Australia, New Zealand and North America.

**Scale:**
The significant scale of TU Dublin serves to emphasise its importance in the Higher Education landscape in Ireland. With over 29,500 students and a dedicated staff of 3,500, it one of the largest Higher Education institutions in Ireland. As a degree-awarding body, TU Dublin attracts students at Level 6 through to Level 10 on the National Framework of Qualifications, and we are also the largest provider of apprenticeship training programmes, with 25% of all enrolments.

Aiming to be inclusive and diverse, TU Dublin welcomes students of all nationalities and backgrounds. Currently 20% of students in the University were born outside of Ireland, while 15% have come through non-standard routes. An educational ‘ladder’ system enables students to enter and exit at the level that best suits their preparedness for higher education, and a new Education Model currently in development will bolster this with more entry points for schools and life-long learners.

**Campus locations:**
As a new University TU Dublin is very well served by its three main campuses, spanning the most highly populated areas of the Ireland’s capital city.

The Blanchardstown Campus, just 13 km to the northwest of the city centre, was established over twenty years ago. Academic and recreational facilities serving over 3,500 students are of a very high standard, including bespoke areas for early childhood studies; horticulture; sports management; and business incubation. The ‘Connect’ building, officially opened by An Taoiseach in 2019, includes both staff offices and student facilities, and further development of the campus is planned.

The Tallaght Campus is situated 12 kms southwest of the city centre. Currently serving a full-time student population of over 5000, the campus has strong and growing part-time student numbers.
attending a wide range of evening programmes aimed at professional upskilling. Close links have been established with the surrounding community and local industry, while the extensive grounds provide ample room for sporting activity for students and local clubs. Construction of a new Sports Science, Health and Recreation (SSHRB) building is under way with plans for further capital development to be in place within the next three years.

In Dublin City centre, 20,000 TU Dublin students are based in a number of locations in the heart of the city. However, development of our new flagship campus at Grangegorman in the north inner city is well advanced and now accommodates 10,000 students. The biggest educational project of its kind in Europe, the Grangegorman Campus is located on an exceptional 73-acre city centre site. The original 19th century buildings at the heart of the site have been beautifully restored and are now in use for students and staff. Two new Quads, comprising 52,000 sq.ms, welcomed 10,000 students in 2020 in 2021. The facilities in the East Quad (16,500 sq.ms) include a 340-seat concert hall, recital rooms and exhibitions spaces that showcase the work of over 3000 students of music, drama, media and the visual arts. The 35,000sq m. Central Quad include state-of-the-art laboratories for a range of science disciplines; kitchens and training restaurant for culinary arts and hospitality; and some of the largest teaching spaces on the campus, including a 250-seat lecture theatre. The next phase of construction has begun with the development of the Academic Hub and Library underway and an expected completion date of Summer 2024.

Benefits available to staff working in TU Dublin

TU Dublin recognises the importance of its people and is actively involved in attracting, recruiting, developing and retaining a talented workforce. TU Dublin aims to be inclusive in all aspects of the work of the University and to create a welcoming atmosphere in which to work and study.

We are committed to demonstrating this through our equality, diversity and inclusion policies together with promoting the Athena Swan agenda.

People are also recognised as one of the three sustaining pillars in the University’s Strategic Plan. One way the University demonstrates how we value our employees is through the range of benefits on offer. These include but not limited to the following:

- Tax Saver travel scheme
- Cycle to Work scheme
- Employee Assistance Programme
- Access to VHI Group Insurance scheme rates
- Facilitation of direct deductions from salary for Hospital Saturday Fund health plan/Income Continuance Plan/VHI Insurance Plan/Cornmarket financial advice plan
- Secondments
- Health and Well-Being programmes
- Fee support for further education
• Fee waiver for TU Dublin programmes
• Staff Development short-courses and seminars e.g. Women Leaders in Education, Project Management, Leadership Development Programme, Aurora Leadership Development for Women
• Mentoring Programmes
• Study and Exam leave
• Erasmus Staff Programme
• Sports facilities and discounted gym membership
• Optometry Centre – free eye tests and discounted glasses
• Networking opportunities throughout the university
• Opportunities to attend conferences
• Irish Language Classes

Faculty of Computing, Digital and Data
The Faculty of Computing, Digital and Data has a strong presence on TU Dublin's Grangegorman, Tallaght and Blanchardstown campuses, offering education and research opportunities to people throughout Dublin, Ireland and across the globe. Our Faculty is organised across four schools, spanning our three campuses. The programmes that are currently offered by the Faculty demonstrate the breadth of opportunity available to prospective students. Our strengths come from our excellent teaching staff, our successful research profile and our close ties with industry, the professions and the health sector. Almost all of our programmes are linked with industry and relevant professions through placement opportunities and other engagement activities, and our research is guided and informed by the needs of relevant sectors.

School of Computer Science
With over 1200 students and 50 staff, the School of Computer Science in TU Dublin is one of the largest in Ireland and has a key role to play in the supply of graduates to the thriving ICT industry nationally and internationally. We provide approximately 10% of all graduates to a key area of skills shortage in Ireland. The School has a strong professional industry-oriented ethos, characterised by an emphasis on active learning and solving real-world problems. It offers professionally oriented undergraduate, postgraduate and PhD programmes which are characterised by strong industry engagement through internships, industry projects and industry accreditation. Its location in the Dublin hub of the global ICT industry and as the city campus of the TU Dublin makes it an attractive destination for international students. Ireland has the second highest concentration of top ICT multinationals in the world and has a thriving indigenous IT sector.
Job Description

Role Overview
The N-Light project at TU Dublin is seeking to recruit a highly motivated postdoctoral researcher or data scientist to research and develop a digital toolkit for the detection of child grooming behaviours and patterns. The aim of the toolkit is to deliver better evidence caseloads for detecting illegal child grooming activities while also informing education programs, policy and policing. The toolkit will use and integrate a variety of information sources (mostly text-based), including child groomer discussion posts from the dark web, reports on illegal content, and information from victims of child grooming. The work will involve the application of artificial intelligence techniques, in particularly natural language processing techniques, to the problem of identifying patterns of behaviour of perpetrators of child abuse. It will also involve the delivery of visual outputs for use by a wide user base.

The successful candidate will be required to attend project meetings, oversee the research assistants, contribute to project reports, communicate with collaborators and disseminate the research through academic publications and presentations.

The work on this Research Programme is carried out by Postdoctoral Research Fellow and research assistants and is autonomous research activity. The mentoring Principal Investigator (PI) will advise the appointee on the conduct of their research which itself will be part of a research programme that the PI is responsible for. The intention is that during the employment of the appointee, they will avail of learning opportunities provided by TU Dublin and/or external agencies related to their particular research programme or research practice in general.

Principal Accountabilities

- Manage and conduct a specific programme of research and scholarship (in the domain of child grooming, applying text-based AI techniques) based on under the leadership of the Principal Investigators.
- Communicate and collaborate with partners and funding body of the NLight project.
- Disseminate the outcomes of this research, including authoring peer reviewed journal and conference papers.
- Assist in the further development of the research programme and in seeking and pursuing appropriate external funding.
- Take responsibility for and manage and conduct administrative and management tasks associated with the programme of research.
- Engage in appropriate training and professional development opportunities as required by the Principal Investigator.
- Play an active role in knowledge and technology transfer activities. Manage research grants in accordance with TU Dublin Financial Regulations and the conditions of the funding body.
- Prepare and present research findings to colleagues for review purposes.
- Prepare progress reports on research for funding bodies as required.
• Seek new areas of research and prepare and submit research bids and proposals that will enhance the reputation of TU Dublin.
• Participate fully in the wider research and scholarly activities of the Research Centre/University and College/School.
• Teach on undergraduate and taught postgraduate programmes for a maximum of 100 hours in one academic year.
• The postholder will carry out any other duties within the scope, spirit and purpose of the job as requested by the PI or Director of the College/School.
• Comply with all TU Dublin policies and regulations, including those in relation to Research Ethics and Health and Safety.

Person Specification

The ideal candidate will demonstrate the appropriate mix of knowledge, experience, skills, talent and abilities as outlined below:

Knowledge and Experience

• A PhD in Computer Science or minimum four years’ experience in a data scientist industry role or equivalent (Essential)
• A strong background in Natural Language Processing (NLP) and machine learning use and research (Essential);
• A strong technical background including strong programming skills (Essential)
• Knowledge of research techniques and methodologies (Essential)
• Evidence of a research profile and publication record within the requisite technical area (Essential)
• Experience in designing and developing visual digital applications (Desirable)
• Strong written and verbal communication skills with ability to present information effectively to a range of audiences. (Desirable)
• Experience of working in the domain of cyber security/ child sexual abuse/ child protection (Desirable)

Skills, talents & abilities

• Commitment to high quality research (Desirable)
• Experience working on collaborative projects (Desirable)

Further information for Post-doctoral Researcher
In the case of a 1st Post-doctoral Fellowship where the applicant may not have graduated yet, the successful applicant must, at the time of appointment, provide a letter from the appropriate graduate studies office confirming that the student has completed the programme including all the examination requirements and is just awaiting the formal graduation ceremony and the likely date on which that will take place.

**Eligibility to compete**

Eligibility to compete is open to candidates who are citizens of the European Economic Area (EEA) or Switzerland. The EEA comprises member states of the European Union along with Iceland, Liechtenstein and Norway. Other candidates may be eligible to compete subject to their having an appropriate work permit for the nature and duration of the position.

For Technological University Dublin staff, a secondment for the duration of the contract may be considered.

**Terms and Conditions of Employment**

A full statement of terms and conditions of employment will be given to the successful applicant in accordance with Terms of Employment (Information) Acts 1994 and 2001.

The main terms and conditions of employment are as follows:

| **Tenure:** | The post will be offered on a Fixed-Term Specified Purpose Wholetime basis. |
| **Location:** | The successful candidate will initially be based in TU Dublin, Grangegorman, but may be reassigned at the discretion of TU Dublin. |
| **Salary:** | The successful candidate will be appointed at point (01) of the Post Doctoral Researcher Salary Scale i.e. €45,322 gross per annum. Remuneration may be adjusted from time to time in line with Government pay policy. Incremental credit may apply in line with University policy. |
| **Hours of work:** | A 37 hour working week is in operation. This can be reviewed by collective agreement, with the Minister for Further and Higher Education, Research, Innovation and Science. Having regard to the nature of the work, attendance outside these hours may be required from time to time. |
| **Probation:** | The terms of the University’s Staff Induction policy and Probation procedure may apply. |
| **Annual leave:** | Annual Leave and Public Holidays shall be granted as per the Holidays (Employees) Act 1973 and Organisation of Working Time Act 1997. The annual leave entitlement for this post is 25 days per annum this is inclusive of the University closure days. |
**Retirement:** The appointee will not be entitled to join the Education Sector Superannuation Scheme; however the University has a PRSA in place. A PRSA is a straightforward pension product that was introduced in 2003 by the Pensions (Amendment) Act 2002. It is a contract between an individual and the authorised PRSA provider in the form of an investment account that can be used to save for retirement.

**Sick Leave:** The terms of the TU Dublin Sick Leave policy will apply. Sick leave will be in accordance with arrangements authorised from time to time by the Minister for Further and Higher Education, Research, Innovation and Science.

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**Other conditions:**

**Nature of the post**
The post will be on a Fixed Term Specified Purpose basis, subject to the terms of the provisions of the Technological Universities Act 2018.

**Application Process**

**Application Form**
The University is committed to equality of opportunity and welcomes applications from all.

However, our employment monitoring data tells us that individuals from Black, Asian and Minority Ethnic (BAME) communities, people with a disability and those who identify as LGBT+ are currently under-represented at the University. As such, we particularly welcome applications from these individuals.

Applications will be accepted through the online application service at [www.tudublin/vacancies](http://www.tudublin/vacancies). A CV will be required in addition to the application form. All correspondence from the University regarding your application will be by email. Please ensure that the security filters on your email provider will accept emails from TU Dublin.

**Closing Date**
The closing date for applications is **5pm (Irish Time) on April 3rd 2024.** Late applications will not be accepted.

The interview assessment will be **40 minutes in length** and will include a presentation of **8 minutes duration.** The topic of this presentation will be as follows:

*A data-driven project that I have conducted as part of my previous research*
Contact information

For further information about this post please contact: Susan McKeever, susan.mckeever@tudublin.ie

For guidance on completing your application please follow steps 1-10 as outlined below in the Guidance on completing the Application Form section.

For queries regarding the application process, please contact Rosemary Okafor at (01) 220 5175 between 9.30 and 5.00pm, Monday to Friday or email rosemary.okafor@TUDublin.ie

Further Information for Candidates

Canvassing will automatically disqualify.

You are also advised that you can only submit one application per competition. Should you have any issues with your submission, please contact us.

TU Dublin is an equal opportunities employer and is committed to the employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community.

In accordance with TU Dublin’s Protection of Children and Vulnerable Adults policy, all candidates applying for a post will be required to disclose previous convictions or pending prosecutions on the Application Form. Candidates applying for a position in a Designated Area will be required to undergo Garda Vetting as part of the selection process. Decisions regarding appointments may be made by University Management based on the candidate’s declaration.

The University may require candidates to undertake a pre-employment medical with an Occupational Health Physician. Normally pre-employment medicals are required for positions with a duration of one year or more. The primary purpose of the pre-employment medical is to assess an individual’s fitness for a particular position or occupation with regard to the requirements for that post. TU Dublin will have regard to its obligations under the Disability policy to make reasonable accommodation for a candidate.

A conditional offer of employment may be made to the successful candidate(s) subject to submission and verification of required evidence of qualifications, professional experience, references, pre-employment medical, Garda Vetting as appropriate. No appointment will be made unless Human Resources verify a candidate’s academic qualifications and/or evidence of professional experience required for the role. In this regard, where a qualification and/or professional experience is an essential criterion, candidates will be required to provide original academic transcripts, parchment and original statements from previous employers. The cost
incurred by an applicant for requesting an academic transcript will not be covered by the University. The University reserves the right to verify documentation with the relevant bodies/employers.

Appointees are also required to furnish:

- as evidence of age, a certified extract from a Public Register of Birth or passport;

- Proof of PPS Number (e.g. social services card);

**Appeals:**

If a candidate wishes to appeal either a shortlisting decision or a Selection Board decision, they must indicate their intention to do so by submitting an email to the Resourcing Manager (referred to as HR Management throughout this appeals process) within 2 working days of the date upon which written notification to the unsuccessful candidate is issued. The email notice of intent must be followed by the submission of the Appeal Form to HR Management. The completed Appeal Form must be submitted no later than 5 working days of the date upon which written notification to the unsuccessful candidate is issued or up to 3 working days after the submission of the email notice of intent. Further details in relation to the University’s Recruitment, Selection & Appointment Policy, including details in relation to the Appeals Procedure, can be found at the following link: [Recruitment, Selection and Appointment Policy](#)

**Guidance on completing the Application Form: Hints and Tips**

“Technological University Dublin (TU Dublin) is committed to attracting, recruiting, developing and retaining the highest calibre of staff to build a diversified, supportive, innovative and inclusive workforce reflective of the wider community. TU Dublin aims to attract the best people who have the experience, knowledge, skills, abilities and competencies to support the University’s mission. TU Dublin supports equality of opportunity, diversity and inclusion and encourages underrepresented groups to make applications and accommodates candidates with disability to apply for posts”

[Recruitment, Selection and Appointment Policy](#)

**The following section is designed to give advice to candidates on how to make their best application.**

1. In accordance to TU Dublin’s commitment to equality of opportunity for all job applicants, if you have a disability that prevents the use of the online system, you will be supported in your application and HR will send you an application pack. You are asked to request any reasonable accommodation in sufficient time to ensure you can participate fully in the process.
2. In accordance to TU Dublin’s commitment to equality of opportunity for all job applicants, the University seeks to gather equality data on its applicants to determine if we are reaching all members of society. The section on Equal Opportunities Monitoring of the application form asks questions regarding the race, age, etc. of applicants. Please note that this section is voluntary and does not have to be completed. The data entered does not appear on the application, and is not seen by any of the Selection board or HR staff. Instead the data is used for statistical purposes only.

3. In order to make a valid application for the post advertised, you must complete all sections of the Application form and you must also submit a CV. In relation to Academic or Research posts, unless otherwise directed in this document, you should limit the number of publications/attachments to a maximum of three.

4. In Section E of the application form, you are asked to provide the details of two referees. If we contact your referees (following interview) they will be given a copy of the job description for the post and the requirements of the role and in this context, they will be asked to comment on your professional work/ability and on your character. TU Dublin also reserves the right to contact referees directly.

5. In the supporting statement, at Section F, you have the opportunity to highlight particular skills, competencies, achievements and personal qualities to support your application. This section carries a word limit of 2,000 characters including spaces. You should adhere to this word limit if you choose to submit this statement by uploading a word document.

6. TU Dublin applies a shortlisting process for all competitions. Therefore, you should ensure that the information provided clearly and fully describes how you satisfy the essential, desirable, and any of the other role requirements set out in the Person Specification. It is important to ensure that your application clearly demonstrates that you hold the qualifications, knowledge and experience required for the role.

Normally, the number of applications received for a position exceeds that required to fill existing and future vacancies of the position. While a candidate may meet the eligibility requirements of the competition, if the numbers applying for the position are such that it would not be practical to interview everyone, TU Dublin may decide that a number only will be called to interview. In this respect, TU Dublin provides for the use of a shortlisting process to select a group for interview who, based on an examination of the applications appear to be the most suitable for the position. The Selection Board will examine the applications against a pre-determined criteria based on the requirement of the position as advertised. This is not to suggest that other candidates are necessarily unsuitable or incapable of undertaking the job, rather that there are some candidates, who based on their application, appear to be better qualified and/or have more
relevant experience. **With that in mind, it is therefore, in your own interest to provide a detailed and accurate account of your qualifications/experience on the application form.**

7. Where possible TU Dublin will indicate the anticipated Interview date within the candidate brief. It is the University’s preference that candidates attend for interview in person. However, if you reside outside the island of Ireland or if you will be temporarily abroad on the date of the interview, TU Dublin may facilitate video conferencing which you must request if you are shortlisted and invited to interview. It is your responsibility to provide the conditions appropriate to an interview setting at the agreed interview date and time, and that you have access to compatible technology to allow the interview to take place.

8. Dublin will not accept a late application. Most competitions are open for up to three weeks. You will not be able to submit an application on the online system once the deadline is passed. Therefore, you should ensure you allow sufficient time to make your application in advance of the closing time.

9. When completing your application, please refrain from copying and pasting or using certain spurious characters such as (\ /"!%&*~< > #), etc. If these characters are used in the text, or when copying and pasting are used, then eRecruit may throw up an error message and may not allow you to submit your application. In addition, if you are attaching a supporting statement instead of typing it into the box provided, please remember to keep to the 2,000 character limit and to also type into the supporting statement box ‘see attached’, if this box is left blank, the application may not submit.


For further information regarding TU Dublin please log onto [https://www.tudublin.ie/](https://www.tudublin.ie/)