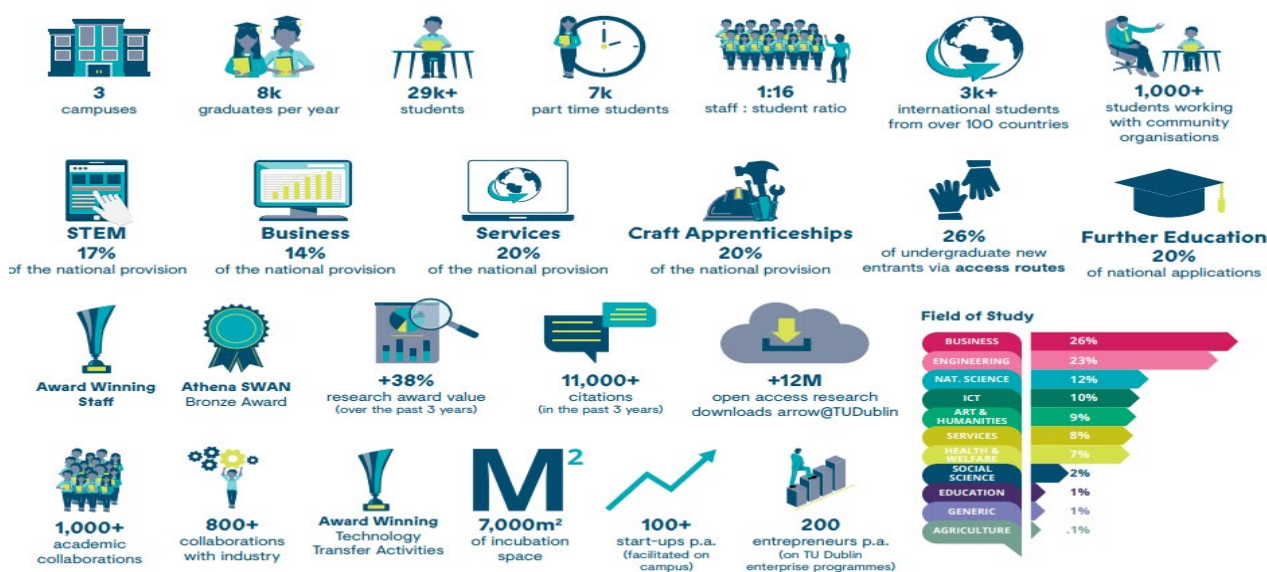




## TU Dublin at a glance

Technological University Dublin (TU Dublin) is the second largest university in Ireland with over 29,000 students and over 3,000 staff working across five locations, including three large campuses in Grangegorman, Blanchardstown and Tallaght. The University was established on 1<sup>st</sup> January 2019 following the integration of Dublin Institute of Technology (DIT), Institute of Technology Blanchardstown (ITB) and Institute of Technology Tallaght (ITT) into a single organisation.

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. Here are just a few of our statistics:



## TU Dublin – A New University for A Changing Ireland

At TU Dublin, 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 has so far 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, and of our staff who support all our students to make their mark on the world.

Find out more about TU Dublin and what each of our five locations can offer at <https://www.tudublin.ie/explore/our-campuses/>

## Benefits available to staff working in TU Dublin

TU Dublin recognise the importance of our people, and we are actively involved in attracting, recruiting, developing, and retaining a talented workforce to meet our ambitions as a university. We offer a wide range of development opportunities for staff to pursue their professional interests through mentoring, study, secondments, and more.

Our aim is 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. TU Dublin has a range of benefits available to employees, these include, but are not limited, to:

Tax Saver and Cycle to Work Schemes	Study and Exam Leave
Blended Working Policy in operation	Irish Language Classes
Extensive Library facilities throughout the university	Opportunities to attend conferences
Enrolment to Public Sector Pension scheme	Networking opportunities throughout the university
Health and Wellbeing programmes	Mentoring programmes
Fee support for further education, with a Fee waiver for TU Dublin programmes	Optometry Centre – free eye tests and discounted glasses
Erasmus staff programme	Sports facilities with discounted gym membership
Staff Development short-courses and seminars e.g., Women Leaders in Education, Project Management, Leadership Development Programme, Aurora Leadership Development for Women	Facilitation of direct deductions from salary for Hospital Saturday Fund health plan/ Income Continuance Plan/Health Insurance Plan/Cornmarket financial advice plan

## TU Dublin's people-focused strategy

At the heart of TU Dublin's overarching strategy lies an aspiration to become a workplace where individuals thrive in their professional and educational pursuits and love the experience of working and learning within our vibrant community. TU Dublin's vision for our people is that we are a place where people love to work and learn, and to be an exemplar of equality, diversity and inclusion.

The university has agreed a long-term strategy 'Strategic Intent 2030' and over the next five years we will deliver our People Plan '28 to move us towards our 2030 vision.

## Research & Innovation Services

The Research & Innovation (R&I) Services are part of the overall design of the TU Dublin R&I organisation. The R&I organisation have three component parts:

**i) R&I Academy** – led and chaired by the Vice President for Research and Innovation (VPRI), the Research and Innovation Academy is responsible for translating the institutional vision and strategy into a University R&I strategy, and for overseeing the implementation of this strategy. The Academy will advise the University Executive Team (UET) on matters relating to research and innovation. Its responsibilities and composition are specified in the approved R&I Academy Terms of Reference.

**ii) R&I Services** – made up of five key functional entities: Graduate Research School, Research Support Services, Innovation & Knowledge Transfer, Impact & Engagement and Research Ethics & Integrity. These report directly to the VPRI and provide services to the TU Dublin Research Community that help ensure that:

- all the university's research activities are carried out in accordance with the terms and conditions of research funders (where relevant).
- researchers are supported in developing research initiatives and research funding applications;
- research postgraduate students are supported via a Quality-assured learning environment that contributes to their professional development;
- research activity is carried out in accordance with the highest possible standards for integrity and ethics;
- research outputs can be effectively transferred to external stakeholders to benefit the society and economy;
- and that the TU Dublin research community effectively engages with internal and external stakeholders to communicate the impact of its work.

## Research Hub 4

This Research Hub acts as an internal platform and an external brand for TU Dublin's research across the ICT/digital media stack, and the domains that ICT intersects. The core mission of Research Hub 4 is to develop the research capabilities and profiles of TU Dublin staff. Research Hub 4 run a set of programmes and support services designed to help TU Dublin staff develop their research careers. The core infrastructure of the Research Hub 4 include:

- (a) Space for hosting PhD, Post-Doctoral and visiting researchers, and
- (b) high-performance computing (HPC) platforms, and
- (c) Reconfigurable lab spaces.

Among other staff development programmes Research Hub 4 also run a Pathways to Funding Programme specifically designed to encourage and support participation in Horizon Europe Pillars 1 and 2, and work in partnership with other hubs, and the Research Support and Development and Hothouse teams to grow staff engagement in research in-line with TU Dublin strategic objectives. In tandem with these activities Research Hub 4 proactively work to increase the representation of TU Dublin researchers in SFI centres thereby also leveraging the resources these national centres provide to support academics engaging with industry and Horizon Europe funding.

The department is seeking to appoint two Postdoctoral Researchers for Predictive Modelling for Stroke, on two fixed term (12 and 18 months) specified purpose basis contracts.

## Job Description

The post holders will be required to carry out the research including, ethics and data management processes and policy, analysing/preprocessing large clinical datasets, designing experiments for the training, running and validation of predictive models, recording, and writing up, and publishing the results, contributing to the creation of project deliverables, and organizing and attending project events, and communicating with and working with project partners.

For the 12-month role, the primary focus will be applying machine learning to predictive modeling of stroke outcomes, such as the modified Rankin scale (mRS). This work will involve the curation, cleaning and data management of both structured clinical and imaging datasets.

The 18-month role will include applying machine learning, statistical analyses and other analytics to clinical data of stroke patients in order to build explainable models predicting stroke risk, post-stroke conditions as well as rehabilitation models for stroke (e.g., gait analysis). Expertise in python, R, and machine learning and data processing software packages will be useful in these roles.

## Key responsibilities

- Manage and conduct a specific programme of research and scholarship under the leadership of the Principal Investigator/Senior member of academic staff.
- Record, interpret and write up the results of the research studies.
- Ensure quality of results through the use of validation and explainability techniques.
- Prepare and present research findings to colleagues for review purposes.
- Contribute to the overall activities of the research team and department as required.
- Assist in the further development of the research design.
- Be responsible for following GDPR policies with respect to patient clinical data.
- Disseminate the outcomes of this research and scholarship including peer-reviewed academic publications of international standing.
- Where appointed to do so by TU Dublin, supervise or co-supervise with a full-time member of TU Dublin staff, graduate research students.
- 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.
- Submit papers to appropriate journals and attend and present findings at appropriate conferences.
- Manage time effectively to meet the deliverables of the project and prepare progress reports on research for funding bodies as required.
- Participate fully in the wider research and scholarly activities of the Research Centre/University and Faculty/School.
- 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 Faculty/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 required for the role as outlined below and must satisfy all of the essential criteria:**

### **Essential**

#### **Knowledge**

- PhD in a relevant discipline with Research experience or equivalent research experience (at least three years) in the public or private sector (**Essential**)
- An undergraduate B.Sc. (Hons) (NFQ level 8) in Computer Science or a related discipline or equivalent award by an approved degree-awarding authority (**Essential**)
- Evidence of research publication record and national/international recognition of achievement within the area of AI for Health (**Essential**)

- Ability to work with a range of ML libraries and resources (e.g., scikit, Tensorflow/Pytorch) and/or ML Ops (**Essential**)

## Experience

- Previous experience of working with large clinical datasets (e.g., data wrangling, data mining) following GDPR policies (**Essential**)
- Extensive knowledge of statistical and explainable supervised machine learning model development and hands-on experience in developing models (e.g., neural networks, logistic regression, etc.) and experience in applying explainability methods to interpret models (e.g. SHAP) (**Essential**)
- Experience in writing up research results and preparing manuscripts for publication (**Essential**)
- Experience applying machine learning methodology to model stroke outcomes, such as mRS (**Essential for 12-month role**)
- Extensive knowledge and hands-on experience applying statistical methods for risk modeling in health (e.g., survival analysis and regression methods) (**Essential for 18-month role**)
- Extensive knowledge and hands-on experience utilizing techniques and methodologies of unsupervised machine learning for model development (e.g., clustering methods, GANs, PCA, etc.) (**Essential for 18-month role**)

## Skills, talents & abilities

- Skilled programmer in one or more of: Python, Julia, R (**Essential**)
- Effective written and verbal communication skills with ability to present complex information effectively to a range of audiences (**Essential**)
- The successful candidate will be highly skilled and motivated with the ability to work independently and as part of a team (**Essential**)

*Candidates will be shortlisted based on their demonstration of meeting every essential criterion so are asked to clearly outline how their experience and qualifications meet the criteria.*

## Desirable

- Experience in preparing deliverables for European (H2020, Horizon Europe projects) (**Desirable**)
- Knowledge of time-series analysis (**Desirable for 18-month role**)
- Knowledge of federated learning techniques (**Desirable for 18-month role**)
- Knowledge of development and implementation of digital twin technology (**Desirable for 18-month role**)

*Candidates may be shortlisted on the basis of none, one or more of these desirable criteria and are asked to clearly outline how their experience and qualifications meet the criteria.*

## Personal attributes required for the role:

- Fluency in foreign languages

## 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 the Terms of Employment (Information) Acts 1994 and 2001.

The main terms and conditions of employment are as follows:

<b>Tenure:</b>	This post is offered on a fixed term specified purpose basis.
<b>Location:</b>	The post will be based at one of the TU Dublin Campuses i.e. Grangegorman (Parkhouse), Blanchardstown or Tallaght. The university may consider flexible working arrangements.
<b>Salary:</b>	The successful candidates will be appointed at point (01) of the Post-Doctoral Researcher Salary Scale i.e. €47,412 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.
<b>Hours of work:</b>	A 37 hour working week is in operation. This can be reviewed by collective agreement, with the Minister for Education & Skills. Having regard to the nature of the work, attendance outside these hours may be required from time to time.
<b>Probation:</b>	The terms of the University's Staff Induction policy and Probation procedure may apply.
<b>Annual leave:</b>	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.
<b>Retirement:</b>	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.

<b>Sick Leave:</b>	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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## Application Process

Applications will be accepted through the online application service at [www.tudublin.ie/vacancies](http://www.tudublin.ie/vacancies). A CV and cover letter 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.

The selection process may include:

- shortlisting of candidates on the basis of the information contained in their application
- a competitive preliminary interview
- completion of online questionnaire(s)
- presentation or other exercises
- a final competitive interview (Competency Based)
- work sample/role play/media exercise and/or any other tests or exercises deemed appropriate

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.

## Closing Date

The closing date for applications is **5.00 pm (Irish Time) on January 20<sup>th</sup> 2025**. **Late applications will not be accepted.**

It is anticipated that interviews for this post will take place in week beginning **February 24<sup>th</sup> 2025**. The interview assessment will be **50** minutes in length and will include a presentation of **10** minutes duration. The topic of this presentation will be as follows:

***“Leveraging Past Experience: My Approach to Predictive Modelling in the area of AI for Health”***

In this presentation, we would like you to overview how your career achievements so far equip you to work on this research project and to present a research plan that you would employ in the project, based on your background and expertise and knowledge of relevant literature.

## Contact information

For further information about this post please contact: Dr Katryna Cisek [Katryna.Cisek@TUDublin.ie](mailto:Katryna.Cisek@TUDublin.ie)

For queries regarding the application process, please contact Rosemary Okafor at (01) 2205175 between 9.30 and 5pm, Monday to Friday or email [rosemary.okafor@tudublin.ie](mailto:rosemary.okafor@tudublin.ie)



## 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 Recruitment 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:

<https://www.tudublin.ie/media/website/for-staff/human-resources/Recruitment,-Selection-and-Appointment--Policy-14.08.23.pdf>

## Further information for Candidates

- Canvassing will automatically disqualify.
- Late applications will not be accepted. You will not be able to apply 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 date and time.
- You may only submit one application per competition. Should you have any issues with your submission, please contact [recruitment@tudublin.ie](mailto:recruitment@tudublin.ie)
- 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. The successful candidate will be required to submit parchments of Degrees, Diplomas, Certificates and other professional qualifications if these are not already on file with Human Resources.
- 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

*“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](#)