

**Senior Research Assistant A - Predictive Modelling for
Stroke Prevention (Fixed term contract for 6 months)
(Reference: SRF 2503009195/2025)
Research Hubs,
Technological University Dublin (City Campus)**

Research Hubs, TU Dublin currently has a position available for a Senior Research Assistant A - Predictive Modelling for Stroke Prevention

Job Description

The department is seeking to appoint a Senior Research Assistant A Predictive Modelling for Stroke Prevention, on a fixed term (6 months) specified purpose basis. The role will include applying machine learning, statistical analyses and other analytics to clinical data of stroke patients in order to build machine learning models predicting risk of stroke occurrence, utilizing python and other software packages. The post holder will be required to carry out the research including analyzing/preprocessing large clinical datasets, training, running and validating predictive models, recording, and writing up the results.

Principal Accountabilities

- Report to Principal Investigator, PhD researcher and research team supervisors.
- Contribute to the research design in relation to the project.
- Manage time effectively to meet the deliverables of the project.
- Ensure quality of results through the use of validation techniques.
- Record, interpret and write up the results of the research studies.
- Prepare and present findings of research activity to colleagues for review purposes.
- Contribute to the overall activities of the research team and department as required.
- Be responsible for following GDPR policies with respect to patient clinical data.
- Engage in appropriate training and professional development opportunities as required by the School or University, and where applicable the PI.
- Carry out any other duties within the scope, spirit and purpose of the job as requested by the PI.
- Actively 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

- 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)**
- A Master's degree in relevant discipline (NFQ level 9) with research experience (at least two years) OR five years post-graduation research experience in the public or private sectors **(essential)**
- Extensive knowledge of research techniques and methodologies of machine learning model development (e.g., neural networks, logistic regression, etc.) **(essential)**
- Ability to work with a range of ML libraries and resources, (e.g., scikit, Tensorflow/Pytorch, R, etc..) **(essential)**
- Evidence of research publication record and national/international recognition of achievement within the area of AI for Health **(essential)**

- Experience in EXplainable Artificial Intelligence (XAI) (**desirable**)
- Experience in pattern recognition and/or digital image processing (**desirable**)
- Experience in applying statistical methods for risk modeling in health (e.g., survival analysis and regression methods) (**desirable**)
- Experience utilizing techniques of unsupervised machine learning for model development (e.g., clustering methods, GANs, PCA, etc.) (**desirable**)

Experience

- Previous experience of data wrangling and curating large clinical datasets following GDPR policies (**essential**)
- Experience in developing machine learning models (e.g., neural networks, logistic regression, etc.) and experience in validating models (**essential**)
- Experience in writing up research results and preparing manuscripts for publication (**essential**)

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**)

Salary

- The successful candidate will be appointed at Point (01) of the Senior Research Assistant A salary scale i.e. €36,794 gross per annum. (Position is for 6 months)

The interview assessment will be **50 minutes** in length and will include a **presentation of 10 minutes** duration. 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 any relevant literature that you may be aware of. The topic of this presentation will be as follows:

‘Leveraging Past Experiences: My Approach to Predictive Modelling for Stroke Prevention’

Interested parties should send a current CV and letter to katryna.cisek@tudublin.ie by 5pm April 16th 2025 with interviews taking place Friday, May 2nd 2025.