



POSTDOCTORAL RESEARCHER – DATA SCIENCE & AI

FULL-TIME POSITION

DATA SCIENCE & AI RESEARCH UNIT, DEPARTMENT OF MEDICAL PHYSICS, HOPITAL UNIVERSITAIRE DE BRUXELLES

Job description

We are looking for a highly motivated candidate with a PhD in Computer Science, Engineering, (Medical) Physics, Mathematics, or equivalent, with a strong background in artificial intelligence or computational modelling, to conduct research in an EU-funded project (<u>https://www.thera4care.eu/</u>) and support other ongoing AI research in the Nuclear Medicine and Radiotherapy Departments of HUB. The activities will focus on all aspects of data science; from supporting the creation of structured databases, to the development and validation of image analysis pipelines using machine- and deep learning. The work will be carried out on the Erasme Campus (Brussels, Belgium) in the Data Science & AI Research Unit of the Hopital Universitaire de Bruxelles. More information on the research unit can be found on the laboratory website: <u>https://mplab-hub.be/</u>.

Project description

The Department of Nuclear Medicine at HUB is internationally recognized as a leading center for both diagnostic and therapeutic applications, integrating advanced imaging and targeted radionuclide therapy. In parallel, it is highly engaged in preclinical, clinical and translational research, ensuring a a feedback loop between bench and bedside. With a strong track record of industry collaborations and innovation, the department secured two EU-funded projects in the past year alone. A major initiative today is the development of a comprehensive data platform to enable standardized collection and centralization, aligned with the FAIR data principles, of multimodal data. This platform will support the development and validation of in-house and commercial AI models, to enable personalised medicine.

Thera4Care (EU-funded project) represents a large consortium of well-established academic radiotheranostic centres, industry partners, European and medical societies focusing on training and education, a patient advocacy group and a project management group. The project aims to establish a European network to rapidly develop and implement radiotheranostics tools and solutions. The project initiated in October 2024, and is scheduled for 5 years. One of its main objectives is to develop a digital platform to centralize multicentre and multimodal data, to develop AI-based tools for better patient stratification, treatment planning and continuous monitoring of (novel) treatment interventions.

Further information on the project can be obtained by contacting: Dr. Ir. Jennifer Dhont (jennifer.dhont@hubruxelles.be), Head of the Data Science & AI Research Unit, HUB.

Funding

Initial funding is available for 2 years, with possible extension for 2 additional years. The salary will be determined based on experience in accordance with HUB's pay scale. Start date: **1**st of October, but there is some possibility to start earlier or later.

Profile

We are looking for a highly motivated, pro-active and creative researcher who can work in a transdisciplinary environment composed of data scientists, computer scientists, medical physicists, and clinicians. The candidate must be able to work independently and will be expected to develop and lead their own projects. They will also mentor junior researchers, and might be expected to contribute to teaching activities. The candidate must:

- Hold a PhD in computer science, engineering, biomedical science, physics, mathematics, or a related field.
- Have in-depth experience in artificial intelligence (machine and deep learning) and/or computational modelling, ideally with multimodal data including medical images.
- Demonstrate a publication record in peer-reviewed journals.
- Have good communication skills, both verbal and written.
- Have strong organizational skills to manage the (international and inter-disciplinary) collaborations in this project.
- Experience in writing succesful grant applications will be considered as an asset.

While some flexibility is possible, we expect team members to be on-site at least 80% of the time during the first year to support collaboration and knowledge sharing.

Application procedure

PhD students soon to be obtaining their PhD degree are welcome to apply provided that they will have obtained the degree before the start of the position. The applicant should provide a motivation letter, a comprehensive academic curriculum vitae including a 1-2 page summary of previous research work and the name and e-mail addresses of two reference persons by e-mail to **Dr. Ir. Jennifer Dhont** (jennifer.dhont@hubruxelles.be) and **Dr. Hugo Levillain** (hugo.levillain@hubruxelles.be) by 1st of July the latest. Selected candidates will then be contacted in the following weeks.