

Postdoctoral Researcher Position in AI-Driven Dementia Diagnosis (m/f/d)

Institut für Diagnostische und Interventionelle Neuroradiologie

The Hospital of the University of Munich, Germany, is one of the largest and most competitive university hospitals in Germany and Europe. 48 specialized hospitals, departments and institutions harbouring excellent research and education provide patient care at the highest medical level with around 11.000 employees.

Workplace	Campus Innenstadt	Date of entry	01.10.2024
Working hours	Full time	Application deadline	Swift
Institution	Institut für Diagnostische und Interventionelle Neuroradiologie	Reference Number	2024-0485
Department	Rauchmann Lab		

Scope of duties

Dementia affects over 55 million people worldwide, with numbers projected to nearly double by 2050. As the prevalence of Alzheimer's and other dementias rises, the need for innovative diagnostic and therapeutic solutions becomes increasingly urgent. Our project, funded by the BMBF (German Federal Ministry of Education and Research), aims to further develop our cutting-edge, cloud-based AI-supported algorithm for diagnosing neurodegenerative diseases, with a particular focus on dementia. Our goal is to translate this advanced technology into the clinical setting, enhancing its practical application and accessibility in healthcare environments. Our goal is to establish a spin-off company providing fully automated diagnostic support within two years.

Your main tasks will include:

- AI Algorithm Development:
 - Enhance and optimize an existing AI algorithm for dementia prediction using multimodal data (including MRI and PET imaging).
 - Ensure adherence to clinical, regulatory, and ethical standards.
- Cloud Deployment and Integration:
 - Support cloud deployment of the AI algorithm on AWS.
 - Integrate the algorithm into a prototype clinical platform.
- Clinical Pilot Study:
 - Support a clinical pilot study to validate the AI algorithm and platform with dementia patients and healthy controls with your technical expertise.
- Team Coordination and Project Management:
 - Lead and mentor a team of Master's, PhD, and MD students.
 - Facilitate collaboration among medical professionals, psychologists, and bioinformaticians.
 - Manage project timelines, resources, and communication to ensure successful outcomes.
 - Help transition this academic project into a market-ready product.


Our requirements

- PhD in Bioinformatics, Data Science, Mathematics, Statistics, or a related field
- Proven experience in AI and machine learning, particularly in imaging and tabular data models (e.g., 3D-CNNs, Transformer models)
- Proficiency in Python programming
- Experience with MRI/PET imaging analysis (preferred)
- Familiarity with AWS cloud platform (preferred but not required)
- Strong organizational and communication skills; a collaborative team player

Our offer

- Work within a multidisciplinary team with extensive expertise in neurodegenerative diseases, dementia, clinical research, MRI and PET imaging, entrepreneurship, biomarker discovery, and bioinformatics.
- Access to high-performance computing resources and a dedicated workstation optimized for model training.
- Opportunities for national and international collaborations and participation in LMU training programs.
- Initial employment contract for two years, starting in October 2024.
- Remuneration is based on the Collective Agreement for the Public Sector of the Länder (TV-L) including all allowances customary in the public sector.

Offers and services of the employer

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|  Further education and training |  Job ticket |
|  Company pension scheme |  Discounts |
|  Childcare services |  Staff accommodation (if available) |
|  Mobile work (if suitable) | |

Herr Dr. Rauchmann, Boris-Stephan



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Application format

Please use the Online-Form for your application

<http://www.lmu-klinikum.de/c62cbaf93cbb5ff0>

Disabled persons will be preferentially considered in case of equal qualification. Presentation costs cannot be refunded.

Please note that we cannot reimburse travel expenses incurred through interviews.

We ask you for your understanding that postal applications will not be returned, but will be destroyed in accordance with data protection regulations. The data usage information also applies to postal applications