

PhD Position: Interpretable Models for Dementia Prediction

Lab for Artificial Intelligence in Medical Imaging (AI-Med)
Department of Radiology, TUM Klinikum
Technical University of Munich (TUM)

The Lab for Artificial Intelligence in Medical Imaging (www.ai-med.de) is inviting applications for a fully funded PhD position in interpretable machine learning for dementia prediction.

The project focuses on developing interpretable deep learning models for dementia prediction using multi-modal data, including MRI, PET, and clinical tabular data. The ultimate goal is to create a clinically relevant and explainable AI system, which will be evaluated in close collaboration with experts from psychiatry, nuclear medicine, and neuroradiology.

Your profile

- A Master's degree in Computer Science or a related field
- Strong background in machine learning, deep learning, and data analysis
- Excellent mathematical and problem-solving skills
- Proficiency in Python and relevant ML frameworks (e.g., PyTorch)
- Prior experience with medical imaging data (MRI, PET, meshes) is a plus
- Passion for interdisciplinary research and working at the interface of AI and healthcare

We offer

- A dynamic and interdisciplinary research environment at one of Europe's leading universities
- Close collaboration with clinical and technical experts
- Access to high-performance computing infrastructure and large medical datasets
- Salary according to TV-L E13 100%
- Opportunities for attending international conferences and publishing in leading journals

Application deadline: 1 May 2025.

To apply, please send a CV, a motivation letter (max. 1 page), and Transcripts of Bachelor's and Master's studies to applications@ai-med.de.

The position is suitable for disabled persons. Disabled applicants will be given preference in case of generally equivalent suitability, aptitude and professional performance.

Data Protection Information:

When you apply for a position with the Technical University of Munich (TUM), you are submitting personal information. With regard to personal information, please take note of the Datenschutzhinweise gemäß Art. 13 Datenschutz-Grundverordnung (DSGVO) zur Erhebung und Verarbeitung von personenbezogenen Daten im Rahmen Ihrer Bewerbung. (data protection information on collecting and processing personal data contained in your application in accordance with Art. 13 of the General Data Protection Regulation (GDPR)). By submitting your application, you confirm that you have acknowledged the above data protection information of TUM.