

PhD candidate (Doktorand) Neuroimaging and AI (ERC project CONNECT) (m/f/d)

Klinik und Poliklinik für Radiologie

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 Großhadern	DATE OF ENTRY	15.07.2026
WORKING HOURS	Full time	APPLICATION DEADLINE	10.05.2026
INSTITUTION	Klinik und Poliklinik für Radiologie	REFERENCE NUMBER	2026-K-0153
DEPARTMENT	Functional Neuroimaging Group		

Scope of duties

The Functional Neuroimaging research group is looking for a highly motivated PhD candidate to join an ERC-funded project, combining neuroimaging and machine learning to advance our understanding of functional connectivity in neurological disorders, with a focus on neuro-oncology and neurodegeneration. During your three-year doctorate period you will be supervised to:

- Implement, and maintain a scalable research database, integrating multimodal neuroimaging data (structural MRI, resting-state fMRI), along with clinical, demographic, and acquisition metadata.
- Design and develop AI-based methods for anomaly detection in brain connectivity data.
- Develop and maintain processing pipelines for large-scale neuroimaging datasets (structural and resting-state fMRI).
- Perform MRI preprocessing, quality control, and functional connectivity analysis.
- Integrate imaging data with demographic and acquisition metadata for machine learning applications.
- Work with large multi-cohort datasets and collaborate in an interdisciplinary team of clinicians, imaging scientists, and AI researchers - including international research partners
- Contribute to cutting-edge research with the goal of publishing in leading international journals.


Our requirements

- Master's degree (or equivalent) in neuroscience, biomedical engineering, computer science, physics, data science, or a related field, with an excellent academic record (e.g., excellent GPA, first-class degree, or equivalent).
- Experience with scientific programming (Python preferred); familiarity with SQL and database systems is desirable. Experience with MATLAB, R, or similar languages, as well as basic scripting skills (e.g., Bash), is welcome.
- Experience working with Linux-based computing environments and large-scale datasets is beneficial.
- Basic understanding of machine learning or deep learning methods.
- Strong interest in neuroimaging, brain connectivity, and machine learning.
- Familiarity with neuroimaging data formats and tools (e.g., NIFTI, BIDS, FSL, AFNI, FreeSurfer) is advantageous; experience with functional MRI (fMRI) analysis is a plus.
- Strong analytical and problem-solving skills.
- Ability to work both independently and collaboratively in an interdisciplinary environment.
- Very good written and spoken English.


Our offer

- A dynamic and interdisciplinary research environment at LMU Klinikum, one of Europe's leading medical institutions.
- An established and structured research group with a strong publication track record, striving for high-impact publications.
- A collaborative and supportive team culture, including regular group meetings, structured supervision, and one-on-one mentoring.
- Strong research infrastructure, including dedicated support in biostatistics, clinical data science, AI algorithm development, and project management.
- Opportunities for career development, including mentorship, grant writing support, and international networking.
- Flexible and family-friendly working conditions, including options for remote work where appropriate.
- The position is limited to three years.
- PhD degree awarded through the Medical Faculty of LMU Munich (PhD in Medical Research, or Dr. rer. nat., or Dr. hum. biol.)
- 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) | |

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Application format

Please use the Online-Form for your application

<http://www.lmu-klinikum.de/bcf853dbeb9847e0>

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