

Postdoc at the intersection of AI and Radiology at Bonn, Full-time, Hybrid

We are looking for a Postdoctoral researcher to join our group at CCI-Bonn.ai (Division for Computational Radiology & Clinical AI). This is an opportunity to delve into AI-driven translational research funded by European Research Council (ERC) and contribute to significant advancements in the clinical application of foundation models for radiology, encompassing Computer Vision and Natural Language Processing (NLP) algorithms. Our research group has consistently contributed to premier journals and conferences, including The Lancet Oncology, The Lancet Digital Health, Nature Communications, Radiology, MICCAI among others^{1,2}. We are developing various tools to support our research projects - You can also check out our work on our GitHub page³ and an online demonstrator for some of our developed algorithms⁴. This is a great opportunity to dive into AI-driven translational research and contribute to significant advancements in the clinical application of Computer Vision or NLP algorithms.

Your Responsibilities:

- Conduct state-of-the-art AI research with large-scale medical images, reports and clinical data
- Work closely with clinicians to translate research work into clinical practices
- Publish your work on national and international conferences and journals

Your Qualifications:

- PhD in computer science, mathematics, physics, statistics, or a related field
- Theoretical and practical experience in deep learning, and machine learning
- Interest in clinical data and working with interdisciplinary teams
- Team player with passion to work in an intercultural environment
- High degree of autonomy and excellent problem-solving skills
- Good communication skills in English (required), and intermediate level of German (at least B2, preferred)

Your Benefits:

- 100% of TVL E-13 with 3 years (TVL E-14 is possible with supervision work)
- Access to large-scale multicentric datasets (>100,000 neuroradiological MR and CT scans, large cohort of text reports etc.)
- The division has exclusive access to the latest and powerful computing resources (NVIDIA DGX (1x B200, 1x H200) clusters). Additional high-performance workstations (with RTX A6000 GPUs, etc.)
- Access to the latest medical imaging scanners (multiple of the latest 3T MR scanners, a 0.065T Swoop hyperfine scanner⁵ and a 7T MR scanner)

- Opportunities to collaborate with other research groups and institutes, such as DKFZ (German Cancer Research Center), DZNE (German research center for Neurodegenerative Diseases), Mathematics Department at the University of Bonn, within EORTC (European Organization for Research and Treatment of Cancer) and within MICCAI BRATS
- Opportunities to attend national and international conferences (MICCAI, CVPR,...)
- Potential for being involved in industry (research) collaborations

Interested? Contact us

Please send your application to contact@ccibonn.ai (cc: Philipp.Vollmuth@ukbonn.de) including your CV and a short cover letter (~ 1 page, about yourself (not included in CV) and your research interest)

¹ Google Scholar page: <https://scholar.google.de/citations?user=z0ENYEQAAAAJ&hl=en>

² Key publications:

- [https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045\(23\)00641-1/fulltext](https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(23)00641-1/fulltext)
- [https://www.thelancet.com/journals/landig/article/PIIS2589-7500\(21\)00205-3/fulltext](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(21)00205-3/fulltext)
- [https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045\(19\)30098-1/abstract](https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(19)30098-1/abstract)
- <https://www.nature.com/articles/s41467-023-40564-8>
- <https://www.nature.com/articles/s41467-022-33407-5>
- <https://pubs.rsna.org/doi/abs/10.1148/ryai.230095>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6865732/>

³ <https://www.github.com/CCI-Bonn>

⁴ <https://stroke.neuroAI-HD.org>

⁵ <https://www.science.org/content/article/mri-all-cheap-portable-scanners-aim-revolutionize-medical-imaging>