

Stellenausschreibungen – Job postings

An der Fakultät für Informatik der Technischen Universität Wien gelangen nachstehende Stellen zur Besetzung:

Die TU Wien strebt eine Erhöhung des Frauenanteils insbesondere in Leitungsfunktionen an und fordert daher qualifizierte Frauen ausdrücklich zur Bewerbung auf. Bei gleicher Qualifikation werden Frauen vorrangig aufgenommen, sofern nicht in der Person eines gleich qualifizierten Mitbewerbers liegende Gründe überwiegen. Wir sind bemüht, Menschen mit Behinderung mit entsprechender Qualifikation einzustellen und fordern daher ausdrücklich zur Bewerbung auf. Bei Rückfragen wenden Sie sich bitte an die Behindertenvertrauensperson der TU Wien, Herrn Gerhard Neustätter.

At the **Institute of Logic and Computation**, in the **Research Unit of Artificial Intelligence Techniques TU Wien** is offering a position as university assistant (prae-doc) to work in the Cluster of Excellence "Bilateral AI" limited to expected 4 years for 40 hours/week.

You will work on artificial intelligence (AI) inspired by multimodal large language model towards the development of novel multimodal AI systems by using insights from large language model research. This research aims to overcome limitations in current multimodal AI approaches in order to improve the application of multimodal AI and machine learning systems to real-world problems (especially in medical domains). You will develop next-generation AI models based on large language model techniques, focusing on multimodal generation areas, such as (but not limited to) image captioning, medical report generation, and visual question answering. You will develop novel AI algorithms and systems inspired by and using insights from large language models for integrating various multimodal data sources (like images, texts, and medical records) to push the boundaries of AI in healthcare domains. This research belongs in particular to and will be done in collaboration with the researchers of the modules RM6 (Explainable AI) and RM8 (Demonstration and benchmarking) of "Bilateral AI".

Tasks:

- Collaboration on research and teaching tasks as well as examinations
- Cooperation and guidance of students
- Research and project activity
- Writing a dissertation and publications
- Participation in scientific events
- Assistance/Collaboration in organizational and administrative tasks

Your profile:

- Completion of a master or diploma curriculum in one of these fields: computer science, artificial intelligence, or related discipline
- Skillful and responsible in experimental work
- Experience in the following scientific fields: multimodal model development, particularly in medical domains (preferably with published papers), and possess good (theoretical and programming) background in deep learning and neural networks (desirably in reinforcement learning, contrastive learning, image captioning, and medical report generation), as well as good programming skills (especially in model architecture and experimental evaluations)
- Very good skills in German and English communication and writing. Knowledge of German (level B2) or willingness to learn it
- Interest in research in the field as well as supervision and work with students
- Very good communicative skills and team competences and innovative ability

We offer:

- A wide variety and exciting range of tasks in a collegial team
- Flexibility in working time arrangements
- A range of attractive social benefits (see [Fringe-Benefit Catalogue of TU Wien](#))
- Wide range of internal and external training opportunities, various career options
- Central location of workplace as well as good accessibility (U1/U4 Karlsplatz)

Entry level salary is determined by the pay grade B1 of the Austrian collective agreement for university staff. This is a minimum of currently EUR 3,714.80/month gross, 14 times/year for 40 hours/week. Relevant working experiences may increase the monthly income.

We look forward to receiving your application until February 27, 2025 on our job platform: <https://jobs.tuwien.ac.at/Job/247643>

At the **Institute of Logic and Computation**, in the **Research Unit of Artificial Intelligence Techniques TU Wien** is offering a position as university assistant prae-doc (all genders) to work in the Cluster of Excellence “Bilateral AI” limited to expected 4 years for 40 hours/week.

You will work on neuroscience-inspired artificial intelligence (AI), with a focus on applying predictive coding in the medical domain. This research aims to address key limitations in current AI systems, such as their inability to provide reliable uncertainty estimation. By leveraging theories of message passing in the brain—such as (but not limited to) predictive coding, you will develop next-generation AI models designed to meet the critical demands of healthcare, including improving interpretability. You will develop novel AI algorithms and systems inspired by and using insights from neuroscience for a variety of application domains and problems in machine learning, such as medical image classification, medical image segmentation, medical report generation, and knowledge graph completion. This research belongs in particular to and will be done in collaboration with the researchers of the modules RM6 (Explainable AI) and RM8 (Demonstration and benchmarking) of “Bilateral AI”.

Ihre Aufgaben:

- Collaboration on research and teaching tasks as well as examinations
- Cooperation and guidance of students
- Research and project activity
- Writing a dissertation and publications
- Participation in scientific events
- Assistance/Collaboration in organizational and administrative tasks

Ihr Profil:

- Completion of a master or diploma curriculum in one of these fields: computer science, artificial intelligence, or related discipline
- Skillful and responsible in experimental work
- Experience in the following scientific fields: good (theoretical and programming) background (desirably with published papers) in machine learning and computational neuroscience (desirably in deep learning and neural networks, self-supervised learning, medical image analysis, predictive coding, large language model), as well as good software engineering skills (especially in system implementations and experimental evaluations)
- Very good skills in English communication and writing. Knowledge of German (level B2) or willingness to learn it
- Interest in research in the field as well as supervision and work with students
- Very good communicative skills and team competences and innovative ability



Informatics

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