

Tenure-track Assistant Professor in Deep Learning Methods & Applications

We are recruiting a tenure-track assistant professor who will establish a cutting-edge research program in deep learning methods & applications. The successful candidate will join the Institute of Artificial Intelligence at the Medical University of Vienna, with ample opportunities to integrate into the European research landscape, including the European Lab for Learning and Intelligent Systems (ELLIS) and European Health Data Space. This is a university-funded tenure-track position with startup package / core funding. The call is open to candidates seeking to establish their first independent group (~ERC Starting Grant) as well as to candidates who are already established group leaders (~ERC Consolidator Grant).



The Goal

Machine learning is transforming medicine, for example by enabling physicians to incorporate vast amounts of data and knowledge into each of their clinical decisions. Machine learning also advances our understanding of the biology that underlies human diseases, with future perspectives to identify molecular disease mechanisms in each individual patient and to devise personalized therapies. Researchers at the Medical University of Vienna, together with the CeMM Research Center for Molecular Medicine and the Austrian Academy of Sciences, are working to establish an ambitious research program focusing on “Machine Learning in Biology and Medicine”, with three pillars: (i) methodological research in machine learning, focusing on interpretable deep learning, causal modeling, federated machine learning, and time series analysis; (ii) proof-of-concept applications in biology and medicine, including personalized medicine and systems biology; (iii) dissemination and impact through sustainable clinical applications, contribution to international consortia, creation of startup companies, and a commitment to research-centric teaching and public outreach. The successful candidate will contribute creatively and proactively to one or more of these directions.

The Candidate

We are looking for candidates with strong expertise in deep learning methodology & applications and the ambition to lead an academic research group that will pursue world-class research in this area. The ideal candidates will have a strong publication record in methodological research (e.g., papers at leading machine learning conferences, journals, widely cited preprints) and a current or future interest in applying their expertise in medicine or biology, in collaboration with biomedical and clinical researchers. A typical background would be a PhD and some postdoctoral research in machine learning, computer science, statistics, bioinformatics or another quantitative field, ideally combining methodologically and applied research. We are open to early-stage candidates who want to start their first independent research group, and to established group leaders who are looking for new challenges (e.g., moving closer to applications in medicine or biology). Responsibilities and support will be commensurate with experience and level of seniority. The position does not require any undergraduate teaching but does provide opportunities to contribute to graduate-level teaching and curriculum development. Prior experience in teaching machine learning is therefore a plus. German-language skills are not required (graduate-level teaching is in English), and both the city and the university provide a highly international environment. Vienna as a city and the university as an employer provide a family-friendly environment with essentially free kindergarten and daycare for children aged 1 to 6, a high-quality public school system, and many international schools. The university provides a tenure-track position with a highly competitive personal salary, an excellent employee benefits package, and a startup package / core funding.

The Host Institution

The Medical University of Vienna is Europe’s largest medical school and one of the oldest in the world. It was founded in 1365 as the medical faculty of the University of Vienna, and it has operated as an autonomous university since 2004. Physicians at the Medical University treat ~95,000 patients per year as inpatients and ~500,000 as outpatients, creating major opportunities for data-driven research. The Medical University has a dedicated Department for Medical Data Science, with research in statistics, medical informatics, complexity sciences, and other areas. In this department, the Institute of Artificial Intelligence (AI Institute) seeks to advance biomedical research and clinical practice through methods development, applications, and teaching in machine learning and artificial intelligence. The AI Institute is directed by Christoph Bock (<https://tinyurl.com/chrbock>), who is Professor of Medical Informatics at the Medical University of Vienna and Principal Investigator at the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences. He is a member of the Human Cell Atlas, Fellow of ELLIS, and recipient of important research awards (Otto Hahn Medal, ERC Starting Grant, ERC Consolidator Grant, Overton Prize, Erwin Schrödinger Prize). The AI Institute currently hosts two additional group leaders and their research groups: Georg Dorffner (<https://tinyurl.com/gdorffner>), who is the vice president of the Austrian Society for Artificial Intelligence, and Matthias Samwald (<https://tinyurl.com/samwald>), who coordinates a major EU project that implements computational methods in clinical practice. The Medical University of Vienna hosts a rapidly growing cluster of machine learning researchers in areas spanning radiology, dermatology, bioinformatics, and synthetic biology. Many researchers at the Medical University of Vienna have successfully applied for European Research Council (ERC) and other high-profile grants (e.g., the Austrian Excellence Initiative), and extensive training and support is available in Vienna for researchers preparing such grant proposals.

Please send your application by e-mail to faculty-recruiting5@meduniwien.ac.at. The application should include: cover letter, curriculum vitae, list of publication, five key publications with download links and a brief statement about their relevance, summary of research and teaching activities (~3-5 pages), concept of future research plans (~1-3 pages), and contact details of at least three references – if possible combined into a single PDF document attached to the e-mail. Please see <https://tinyurl.com/4jvkmajh> for additional details.

All applications received by 1 October 2023 will be considered. Start dates are very flexible. Please address questions about the application to Dalibor Mikic / Ana Mendes (sec-ai@meduniwien.ac.at) and scientific questions to Christoph Bock (christoph.bock@meduniwien.ac.at).