Senior Postdoc & Scientific Project Manager "Machine Learning in [Bio]Medicine"

We are recruiting an ambitious scientist who will play a central role in the development and implementation of a machine learning strategy at the Medical University of Vienna, and within the broader context of the European Lab for Learning and Intelligent Systems (ELLIS). The successful applicant will work closely with Christoph Bock (head of the Medical University's "Institute of Artificial Intelligence and Decision Support" and principal investigator at the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences), focusing on strategic and organizational matters. She or he will also pursue relevant research in machine learning, with the perspective of establishing an independent research group. The position comes with a tenure-track option, including the possibility of early tenure upon exceptional achievement.

The Goal

Machine learning is transforming medicine, for example by enabling physicians to incorporate vast amounts of information and knowledge into each of their clinical decisions. Machine learning also advances our understanding of the biology that underlies human diseases, with the future perspectives of identifying the key molecular mechanisms in each individual patient and devising personalized therapies. Researchers at the Medical University of Vienna, together with the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences, are working to establish an ambitious research program focusing on "Machine Learning in [Bio]Medicine", with three pillars: (i) methodological research in machine learning, e.g. focusing on interpretable deep learning, causal modeling, federated machine learning, and/or 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 is expected to contribute proactively and creatively to several of these directions.

The Candidate

We are looking for candidates who want to contribute broadly to Machine Learning in [Bio]Medicine, through their own research and by taking on a range of strategic and organizational tasks. A typical background would be a PhD in machine learning, computer science, statistics, bioinformatics or in another quantitative field, ideally combining methodologically and applied research (in any field). Initial postdoctoral experience, prior exposure to biomedical applications of machine learning, and/or experience in scientific project management are a plus but not a precondition. The position includes ample opportunities for advancing a research career and for developing organizational and leadership skills. The university provides an excellent employee benefits package. The expected starting salary is EUR 55,000 to EUR 60,000 per year (gross).

Christoph Bock (https://scholar.google.com/citations?user=9qSsTcIAAAAJ)

Christoph Bock is Professor of [Bio]Medical Informatics at the Medical University of Vienna and head of the Institute of Artificial Intelligence, which is part of the Medical University's data science department (CeMSIIS). He is also a Principal Investigator at CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences in Vienna, leading a research group that combines experimental biology (high-throughput sequencing, epigenetics, CRISPR screening, synthetic biology) with computational methods (bioinformatics, machine learning, artificial intelligence) in the areas of cancer, immunology, and precision medicine. He coordinates an EU Horizon 2020 project that contributes single-cell sequencing of human organoids to the Human Cell Atlas. He is a fellow of the European Lab for Learning and Intelligent Systems (ELLIS) and an elected member of the Young Academy of the Austrian Academy of Sciences. He has received important research awards, including the Otto Hahn Medal of the Max Planck Society (2009), an ERC Starting Grant (2016-2021), an ERC Consolidator Grant (2021-2026), and the Overton Prize of the International Society for Computational Biology (2017). In 2019, 2020, and 2021 he was included in the global list of "Highly Cited Researchers" by Clarivate Analytics (ISI Web of Science). He co-founded Aelian Biotechnology in 2018, creating a successful Vienna-based startup company that develops and applies single-cell methods for high-throughput biology and drug discovery.

Medical University of Vienna (https://www.meduniwien.ac.at/web/en/)

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 operates 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 data science department (CeMSIIS), with research in statistics, medical informatics, complexity sciences, and other areas. In this department, the "Institute of Artificial Intelligence" is committed to advancing biomedical research and clinical practice through methods development, applications, and teaching in the field of machine learning and artificial intelligence. In addition, the Medical University comprises a rapidly growing cluster of machine learning researchers in areas spanning radiology, dermatology, bioinformatics, and synthetic biology.

CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences (http://www.cemm.at/)

CeMM is an international research institute of the Austrian Academy of Sciences and a founding member of EU-LIFE. It has an outstanding track record of top-notch science and medical translation (last few years: >10 papers in Nature/Cell/Science/NEJM, >25 papers in Nature/Cell sister journals). With ~150 researchers, CeMM provides a truly collaborative and personal environment, while maintaining critical mass and direct access to all relevant technologies. Research at CeMM focuses on cancer, inflammation, and immune disorders. CeMM is located at the center of one of the largest medical campuses in Europe, within walking distance of Vienna's historical city center. A study by "The Scientist" placed CeMM among the top-5 best places to work in academia world-wide (https://www.the-scientist.com/features/best-places-to-work-academia-2012-40676). Vienna is frequently ranked the world's best city to live. It is a United Nations city with a large English-speaking community. The official language at CeMM is English, and more than 40 nationalities are represented. CeMM promotes diversity and equal opportunity.

Please send your application to sec-ai@meduniwien.ac.at. The application e-mail should include a cover letter, CV, and academic transcripts, ideally combined into a single PDF document. Any application received by 10 April 2022 will be considered. Start dates are very flexible.