Technische Universität Berlin

Technische Universität Berlin offers an open position:

Research Assistant - salary grade E13 TV-L Berliner Hochschulen - For qualification
Part time employment may be possible

Prof. Dr. Uwe Ohler (MDC) and Prof. Dr. Grégoire Montavon (BIFOLD) are looking for a research assistant in the field of machine learning and medicine for a BIFOLD Agility project focused on self-supervised learning on high-throughput biological data for decoding and designing gene regulatory circuits.

The Ohler lab focuses on decoding and designing gene regulatory circuits by means of high-throughput genomics and applied machine learning. The BIFOLD-JRG Montavon is developing new methods for explaining complex ML models with applications in medicine. The project includes the following aspects: (i) Develop generative machine learning models and algorithms for the analysis and integration of large-scale omics data. (ii) Implement and/or tune foundation models for -omics data. (iii) Adapt and utilize methods from explainable artificial intelligence to understand gene regulation. (iv) Develop and document scalable pipelines for reproducible analyses. (v) Apply and validate your approaches on (single-cell) data from our lab and our collaborators.

Faculty IV - BIFOLD / Machine Learning
Reference number: IV-618/24 (starting at 01/03/25 / for 3 years / closing date for applications 13/12/24)

Working field:

: You will (i) work in a collaboration of two groups at the Berlin Institute for the Foundations of Learning and Theory (BIFOLD) and the Max Delbruck Center for Molecular Medicine (MDC), (ii) work with an integrated team of experimental and computational scientists to apply cutting edge explainable AI to decipher gene regulation, (iii) collaborate with team members to integrate and interpret data from multiple sources, (iv) present research findings at internal and external meetings and conferences, (v) publish your findings in high-impact scientific journals, and (vi) contribute to grant applications or other funding applications to develop your own independent research interests. Teaching tasks.

Requirements:

- Successfully completed university degree (Master, Diplom or equivalent) in computer science, bioinformatics or a related field with a focus on machine learning
- Extensive experience in the field of statistical methods and machine learning
- Very good programming skills (e.g. in Python, NumPy/SciPy, PyTorch/TensorFlow) are essential
- Experience in the analysis of bio-medical high-throughput data using cluster/GPU computing resources, is required
- Participation in different formats of teaching, training and outreach
- The ability to teach in German and/or in English is required; willingness to acquire the respective missing language skills

Desirable:

- Strong verbal and written communication skills and the ability to work effectively in a collaborative team environment
- Strong problem-solving and analytical skills and the ability to think creatively

Please send your written application, quoting the **reference number** and including the usual application documents (i.e. at least cover letter, CV, graduation certificates, grade overviews, etc.), to **Technische Universität Berlin - Die Präsidentin - Fakultät IV, Institut fu?r Softwaretechnik und Theoretische Informatik, FG Maschinelles Lernen, NWG Prof. Dr. Grégoire Montavon, Sekr. MAR 4-1, Marchstr. 23, 10587 Berlin** or by email (one PDF file, max. 5 MB) at: **jobs@bifold.berlin**.

For cost reasons, application documents sent by post will not be returned. Please submit only copies.

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guarantee for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung/ or quick access 214041.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities. Applications from people of all nationalities and with a migration background are very welcome.

The vacancy is also available on the internet at https://www.personalabteilung.tu-berlin.de/menue/jobs/

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