Technische Universität Berlin

Technische Universität Berlin offers an open position:

Research Assistant - Entgeltgruppe 13 TV-L Berliner Hochschulen - 1st qualification period (PhD candidate)

part-time employment may be possible

Faculty IV - BIFOLD / Management of Data Science Processes
Reference number: IV-22/25 (starting at the earliest possible / until 30/04/30 / closing date for applications 06/06/25)

Working field:

The DEEM Lab (https://deem.berlin) is looking for a research associate to conduct research in responsible data engineering. The research will focus on data preparation and data pipelines for complex machine learning (ML) systems. Such ML systems are increasingly used to automate impactful decisions but suffer from many unsolved data management challenges with respect to their correctness, reliability, and compliance with legal regulations.

The goal of the research will be to design and efficiently implement data-centric methods to make ML systems guarantee their users control over their personal data (e.g., with respect to the "right-to-be-forgotten" from GDPR) and adhere to legal regulations such as the upcoming European AI Act.

This will be achieved via novel declarative methods to create, maintain and assess datasets for ML use cases. These will assist non-expert users with data-centric tasks, such as evaluating the robustness of their ML pipelines to data errors and potentially leverage the code generation capabilities of large language models. The resulting methods will be accompanied by efficient and scalable implementations and made publicly available as open source libraries. Teaching tasks.

Requirements:

* Successfully completed university degree (Master, Diplom or equivalent) in Computer Science or Artificial Intelligence
* Strong programming skills in Python and at least one additional language (Java/Rust/C++)
* Knowledge in data processing with dataflow systems, relational databases and/or dataframe libraries (e.g., Apache Spark, DuckDB, pandas, etc.)
* Experience with increasing the efficiency, scalability and correctness of data-centric programs
* Basic knowledge of machine learning and common libraries (e.g., pandas, sklearn, pytorch, SparkML, etc.)
* The ability to teach in German and/or English is a prerequisite; willingness to acquire the missing language skills in each case

Desirable:

* First-hand experience with real world data processing systems and/or ML deployments (e.g., from internships, jobs or entrepreneurial experience)
* Contributions to open source projects

Please send your application with the usual documents exclusively by e-mail to Prof. Dr. Sebastian Schelter at **schelter@tu-berlin.de** , quoting the **reference number**.

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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