Technische Universität Berlin

Technische Universität Berlin offers an open position:

Research Assistant (PostDoc) - salary grade E13 TV-L Berliner Hochschulen - 2nd qualification period
under the reserve that funds are granted - part-time employment may be possible

Faculty IV - Institute of Software Engineering and Theoretical Computer Science / Database Systems and Information
Reference number: IV-760/19 (starting at 01/01/20 / for 3 years / closing date for applications 06/12/19)

Working field: The system architecture of database management system (DBMS) is rather complex, with query pro¬cessor and storage management as essential components. Due to heterogeneous hardware and complex requirements in terms of query languages, data types and scalability, the complexity of these components continues to increase. The aim of this research project is to investigate the reduction of the complexity of a DBMS through the "Machine Learning (ML) for Systems" or "Software 2.0" approach. The fundamental research question we strive to answer are "Which components of a database system can be replaced or improved by ML methods?" and "How should such a system be architected?" Previous successful research has achieved breakthroughs through learning query optimizers or learned indexes. In this project, we strive to develop ML algorithms and models for components of a database system, integrate them into an open-source system architecture, and demonstrate their efficiency and effectiveness. This position includes teaching and enables further qualification through postdoctoral achievements (equivalent to a Habilitation).

Requirements: Successfully completed university degree (Master, Diplom or equivalent) and PhD in Database Management Systems. They should be interested in developing a novel system and conduct research in a real-world application setting. Ideally, applicants should possess knowledge in systems programming, data management, machine learning and computer architecture. Applicants experienced in open source DBMS such as Postgres or MySQL, or data processing systems such as Apache Calcite, Flink or Spark will be looked upon favorably. In addition, fluency in German and good knowledge of English are required. Moreover, past open-source projects, industry experience, project management, or teaching experience will be looked upon favorably.

Please send your **written** application with the **reference number** and the usual documents (in particular cover letter, CV, academic transcripts, and reference letters) to Technische Universität Berlin - Der Präsident - **Fakultät IV, Institut für Softwaretechnik und Theoretische Informatik, FG Datenbanksysteme und Informationsmanagement (DIMA), Prof. Dr. Markl, Sekr. E-N 7, Einsteinufer 17, 10587 Berlin** or by e-mail to **jobs@dima.tu-berlin.de**.

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.

Please send copies only. Original documents will not be returned.

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

Zertifikat seit 2008
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