Hasso Plattner Institut
Digital Engineering · Universität Potsdam

POSTDOCTORAL RESEARCHER FOR IN-MEMORY AND CLOUD-BASED ENTERPRISE DATA MANAGEMENT

WHAT TO EXPECT

The **Enterprise Platform and Integration Concepts (EPIC)** research group led by **Prof. Dr. h.c. mult. Hasso Plattner** (co-founder of SAP) focuses on the technical aspects of business software, in particular the principles of in-memory and cloud-based data management, the integration of different software systems into one suite, and the data-driven decision support of businesses. This includes the study of changing needs for enterprise database management systems and the development of new solutions that increase the performance, scalability, and cost efficiency of database systems.

For this, we develop the open-source database Hyrise (and its cloud-native fork Skyrise), which serves as a flexible platform for our research. We implement approaches that improve the efficiency of databases by making them self-driving, i.e., enabling them to automatically adapt to different customer workloads and intelligently allocate system resources. Additionally, we constantly evaluate new technologies for their applicability in the area of enterprise data management and encourage the exploration of new hard- and software trends.

This work is done in close collaboration with the SAP HANA engineering team as well as with SAP customers, allowing us not only to verify our approaches in real-world scenarios but also to have an immediate impact on future database products.

As a **postdoctoral researcher** in the EPIC group, you will be part of a technology-focused team that investigates the future generation of enterprise software.

We are looking for exceptional candidates to strengthen our research group who are interested in both conceptual work and software engineering. You are expected to bring your own database-related topic, do research on autonomous data management, and work on specific enterprise research questions together with our Ph.D. candidates.

This work includes but is not limited to expertise in in-memory databases, cloud-native development, and enterprise integration; development of working prototypes in close collaboration with our industry partners; publishing and presenting your results at international conferences and journals; and finally supporting our teaching activities; working on a habilitation is encouraged.

SKILLS AND COMPETENCIES

- Very good Ph.D. degree in computer science, software engineering, or a related field
- Strong programming skills in C++
- Good analytical skills in order to assess data and present core insights in a clear and compelling way
- High drive to new technologies and understanding how these help to tackle enterprise challenges
- Reliable and open-minded with strong team working skills, determined to reach a goal in time as well as the ability to work independently and to prioritize
- Fluent English and preferably German language skills - written and verbal

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The **Hasso Plattner Institute (HPI) in Potsdam** is Germany's university center of excellence for digital engineering, advancing research and education in IT systems engineering, data engineering, cyber security, entrepreneurship, and digital health. With its bachelor's and master's degree programs, the Faculty of Digital Engineering, established jointly by HPI and the University of Potsdam, offers innovative engineering- and application-oriented study programs. At present, more than 650 students are enrolled in the program. HPI consistently earns a top-notch place in the CHE University Ranking.

At HPI there are currently 20 professors and over 50 guest professors and lecturers. HPI conducts research noted for its high standard of excellence in its IT topic areas. PhD candidates carry out research at the HPI Research Schools in Potsdam and its branches in Cape Town, Haifa, Irvine and Nanjing. The focus of HPI's teaching and research is on the foundations and applications of large, highly complex and networked IT systems. In addition, HPI concentrates on the development and research of user-oriented innovations for all areas of life.

Interested? Get in touch with us and pitch your research topics!

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