Technische Universität Dresden

As part of the German government's artificial intelligence (AI) strategy, the successful Saxon competence center ScaDS.AI Dresden/Leipzig (Center for Scalable Data Analytics and Artificial Intelligence) is being expanded into a leading German AI competence center for Big Data and Artificial Intelligence (AI). For TUD Dresden University of Technology diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the **Center for Interdisciplinary Digital Sciences (CIDS),** the **Department for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI Dresden)** offers a full-time project position as

Research Associate / PhD Student (m/f/x)

(subject to personal qualification, employees are remunerated according to salary group E 13 TV-L)

starting **September 1, 2026**. The position is limited to 3 years. The period of employment is governed by § 2 (2) Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG).

The LLM-OCR-D project, funded by the German Research Foundation (DFG), aims to create adaptive full-text transformation of extensive historical collections using generative language models. The project seeks to develop a production-ready solution, i.e., one that is high-quality, robust, and scalable for the semi-automated full-text transformation of diverse digitized collections, building on tools from the OCR-D ecosystem. The focus lies on the intelligent selection and execution of OCR workflows, quality assurance and post-correction using large language models (LLMs), as well as structured preparation for scholarly reuse. In addition, the project will examine the practical suitability of novel multimodal LLMs that can operate directly on scans and thus potentially replace or simplify traditional OCR processing steps. The project therefore combines established tools from the OCR-D ecosystem with innovative AI-based methods and near-production execution on high-performance computing systems at ScaDS.AI providing direct added value for libraries, humanities research, and digital infrastructures.

Professional assignment: Chair of Scalable Software Architectures for Data Analytics (Prof. Dr. Michael Färber)

Research areas: Natural Language Processing, Large Language Models, Knowledge Graphs, and related fields (e.g. Graph Machine Learning)

Tasks:

- scientific research in at least one of the above-mentioned research areas
- collaboration in national and international research projects, possibly with an industrial collaboration
- presentation and publication of research results in top-tier conferences/journals
- project-based support for students

The position comes with access to high performance computing resources and access to training opportunities within ScaDS.AI.

Requirements:

- university degree (M.Sc., or similar) in Computer Technology, Computer Science, Artificial Intelligence, Mathematics, Physics, Computational Linguistics, or a related field
- strong interest in foundational research in the above-mentioned research areas
- strong programming skills, preferably in Python, including experience with deep learning frameworks (e.g., PyTorch, TensorFlow) and related tools
- good written and spoken English skills
- strong analytical and problem-solving skills
- highly motivated and able to work independently and in teams
- prior research experience (publications, theses, projects) in the above-mentioned research areas is a strong plus

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a family-friendly university. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Application: Please submit your detailed application with the usual documents (e.g., cover letter, CV, and other supporting documents), quoting the **job reference "ScaDS.AI Färber LLM-OCR-D"** by **May 12, 2026** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to **jobs-scads.ai@tu-dresden.de** or to:

TU Dresden, ScaDS.AI, Prof. Dr.-Ing. Michael Färber, Helmholtzstr. 10, 01069 Dresden, Germany.

Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN concept

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.