Zertifikat seit 2008
audit familiengerechte hochschule

TECHNISCHE UNIVERSITÄT BERLIN

**Reference number:** IV-531/25 **Published:** 16.01.2026 **Start date (earliest):** 01.10.2026, temporary
**Salary:** Salary grade 13 TV-L Berliner Hochschulen
**Full/Part-time:** full-time, part-time employment may be possible **Application deadline:** 13.02.2026

# 10 positions - Research assistant - 1st qualification period (PhD candidate)

Faculty IV - Electrical Engineering and Computer Science, Berlin Institute for the Foundations of Learning and Data (BIFOLD)

## About us

Join the 'Berlin Institute for the Foundations of Learning and Data' (BIFOLD; www.bifold.berlin) as a doctoral student in our Graduate School, where you will contribute to cutting-edge research in Data Management, Machine Learning, and their intersection. BIFOLD conducts scalable agile fundamental research in the field of AI in the German AI metropolis of Berlin. The institute is part of the network of six national competence centres for artificial intelligence research in Germany. Their joint task is to further establish Germany's leading position as top-tier location for research on AI technologies.
Doctoral students in the BIFOLD Graduate School benefit from comprehensive guidance by renowned international scientists, interdisciplinary exchange, and professional development opportunities at one of the world's leading AI research centres. Alongside cutting-edge research projects we offer access to international conferences, summer schools, workshops, and a variety of professional development opportunities, including comprehensive mentoring, funding for conference visits, and guest scientist programs. BIFOLD stands for an international, collegial and family-friendly working environment.

## Your responsibility

Based on the overarching research foci of BIFOLD, the Graduate School offers PhD projects in the areas of current challenges in AI, Data Science and distributed analysis of large amounts of data, with a focus on Data Management, Machine Learning, and their intersection; including the development of novel theories, algorithms, and technologies, as well as prototypical systems and tools.

Our research groups in the field of Data Management

- Database Systems and Information Management (Prof. Dr. Volker Markl),
- Data Integration and Data Preparation (Prof. Dr. Ziawasch Abedjan),
- Management of Data Science Processes (Prof. Dr. Sebastian Schelter),
- Big Data Engineering (Prof. Dr. Matthias Böhm),
- Big Data Analytics for Earth Observation (Prof. Dr. Begüm Demir),

- Distributed Data Stream Processing in Heterogeneous Environments (Dr. Steffen Zeuch) and in the area of Machine Learning
- Machine Learning (Prof. Dr. Klaus-Robert Müller),
- Machine Learning and Security (Prof. Dr. Konrad Rieck),
- Probabilistic Modeling and Inference (Dr. Shinichi Nakajima),
- Intelligent Biomedical Sensing (Dr. Alexander von Lühmann),
- Machine Learning for Molecular Simulation in Quantum Chemistry (Dr. Stefan Chmiela)

address cutting-edge challenges in artificial intelligence and data science. You can find further details at https://www.bifold.berlin/research/workgroups.

We are offering five positions focused on Data Management and five on Machine Learning, each aligned with one of our research groups. Brief descriptions of the current research projects and associated doctoral subjects of the individual BIFOLD research groups can be found on our website https://www.bifold.berlin/education/thesis-opportunities. Applicants are encouraged to explore the research groups and select the research areas that align with their interests in the application.

## Your profile

- Successfully completed academic university degree (Master, Diploma, or the equivalent) in computer science (e.g., theoretical, methodological-practical, or technical computer science) or closely related fields of study with a focus on at least one BIFOLD core area, with very good grades. It is possible to apply before completing your studies, but proof of graduation must be provided at the latest upon conclusion of the contract.
- Good programming skills (e.g., Python, Java, Scala, C/C++, Rust),
- For positions in the field of Data Management: hands-on experience in the use and (optionally) implementation of big data systems (e.g., Apache Flink, Apache Spark, Dask) or database systems (e.g., PostgreSQL)
- For positions in the area of Machine Learning (ML): very good knowledge of machine learning theories and methods (e.g., core methods, deep neural networks), practical experience in developing and applying ML algorithms, experience with linear algebra / neural network frameworks (e.g., NumPy, PyTorch, TensorFlow, JAX),
- For positions in the intersection of Data Management/Machine Learning: hands-on experience in applied ML (feature and model selection, ML frameworks, model evaluation and debugging), data integration, data science pipelines, data quality, as well as (optional but advantageous) experience in multi-modal data representations, alignment, data-centric ML pipelines, and ML for applications such as health-care or remote sensing,
- Excellent communication skills in English,
- Basic knowledge of German or the willingness to learn German,
- Early experience in research and paper writing is an advantage,
- Experience in teaching and didactic competence is an advantage.

We are looking for highly motivated, curious, enthusiastic, and results-oriented researchers with excellent academic records and strong research interests in the areas of Data Management, Machine Learning, and their intersection.

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## How to apply

Please send your application, quoting the **job reference number** and including the usual documents (in particular, filled-in application form (https://www.bifold.berlin/fileadmin/user_upload/Content/Graduate_School/BIFOLD_GS_application_form.pdf), letter of motivation, latest CV, copies of your Bachelor's and Master's certificates, official copies of your academic transcripts, list of publications preferably in English, by e-mail as one file in PDF format to Prof. Dr. Volker Markl and Prof. Dr. Klaus-Robert Müller, at **gsapplication@bifold.tu-berlin.de**.

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guaranty 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/.

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.

Data protection:

Full job posting: