



Technische Universität Berlin offers an open position:

## Student assistant (40 hours per month)

**Faculty IV: Electrical Engineering and Computer Science - Institute of Software Engineering and Theoretical Computer Science**

**Reference number:** IV-SB-0003-2025 (starting at the earliest possible / limited for 2 years / closing date for applications 05/02/25)

### Working field:

The Intelligent Biomedical Sensing (IBS) Lab at TU Berlin's BIFOLD / Machine Learning Department develops miniaturized wearable neurotechnology and body-worn sensors for unobtrusive monitoring of the embodied brain in the everyday world. It uses machine learning on multimodal sensor data, together with environmental context information toward intelligent monitoring and individualized comprehensive understanding of physical and mental states and risk factors. To learn more visit [www.ibs-lab.com/mission-statement](http://www.ibs-lab.com/mission-statement).

As part of the ERC project "INTEGRAL" we are looking for a student research assistant in the domain of Naturalistic Brain-Body Monitoring Experiments and Signal Analysis.

- approx. 50%: support in setting up, running and maintaining the lab's biosensing environment and conducting experiments
- approx. 30%: support in the scientific work developing infrastructure and methods for context-sensitive bio signal acquisition (e.g. by adopting solutions for eye and motion tracking, computer vision, speech-to text) and time series analysis of the corresponding data
- approx. 20%: support with data conditioning and with documentation in the form of reports and scientific papers

### Requirements:

Must:

- excellent and extensive knowledge in the areas of neuroscience, computational neuroscience, computer science, mathematics, or similar
- very good knowledge in the area of planning and conducting neuroscientific experimental protocols and paradigms
- competent programming and scripting skills (especially in Python / Matlab) and corresponding libraries (e.g. sklearn, NumPy, ...)
- very good written and spoken English skills

Can:

- hands-on experience with one or several of the following: Signal acquisition with Electroencephalography (EEG), functional Near Infrared Spectroscopy (fNIRS), functional Magnetic Resonanz Imaging (fMRI), computer vision (e.g. OpenCV), language models / speech-to-text (e.g. GPT, whisper), eye tracking, photogrammetry, motion tracking (e.g. Kinect sensors)
- experience in scientific work
- experience in dealing with version control tools, e.g. Git;
- prior experience in bio signal acquisition in human experiments
- interdisciplinary and cooperative project experience
- team player and good communicator
- pronounced analytical and conceptual skills
- a high level of initiative, self-motivation and results orientation

**Party responsible for specialist area / point of contact for job posting:** Dr. Ing. Alexander von Lühmann

**Period of employment:** immediately, limited for 2 years

**Apply to:** [vonluehmann@tu-berlin.de](mailto:vonluehmann@tu-berlin.de)

Please submit your written application including cover letter, your CV, certificate of enrollment, and where applicable, current transcript of records, with the reference number to the place of employment indicated above.

In the interest of promoting equality opportunities for men and women, applications from women with suitable qualifications are particularly encouraged.

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

