Technische Universität Berlin

Technische Universität Berlin offers an open position:

Research Assistant - salary grade E13 TV-L Berliner Hochschulen

part-time employment may be possible

The Berlin Institute for the Foundations of Learning and Data (BIFOLD) at TU Berlin is seeking a Research Associate (f/m/d) in the field of Machine Learning and Computer Vision for an Agility subproject. The project is part of the NebulaStream team, led by Prof. Volker Markl and Dr. Steffen Zeuch.

Entitled "Analysis of Intraoperative Sensor Data Streams to Support Minimally Invasive Surgical Procedures", the project aims to perform an integrated analysis of sensor data streams captured during minimally invasive surgeries. To this end, complementary sensor data will be combined using the NebulaStream framework, enabling accurate detection and analysis of the various surgical phases. These insights are intended to support risk assessment, clinical decision-making, and logistics. For the analysis of echocardiographic and endoscopic video sequences, the project will evaluate scalable, resource-efficient, and clinically applicable multi-task deep learning networks.

Faculty IV - The Berlin Institute for the Foundations of Learning and Data (BIFOLD) / Database Systems and Information
Reference number: IV-256/25 (starting at the earliest possible / for 3 years / closing date for applications 25/07/25)

Working field:

Independent and responsible research in the field of Machine Learning and Computer Vision.

Processing of image and sensor data streams may involve the application of multi-task deep learning methods. Alternative approaches for data analysis, data fusion, and appropriate visualizations are to be autonomously designed and evaluated. Key factors to be considered in the conception and evaluation of suitable solutions include the hardware constraints and real-time requirements of the clinical environment.

Requirements:

- Successfully completed university degree (Master, Diplom or equivalent) in computer science, industrial engineering, or business informatics.
- Experience in image and sensor data processing and machine learning required, preferably in the area of neural network architectures for geometric and high-dimensional data
- Excellent programming skills in Python, NumPy/SciPy, PyTorch/TensorFlow, and C++ are essential
- Good knowledge of German and/or English required; willingness to acquire the respective missing language skills

Desirable:

- Experience in the analysis of medical image data is of advantage.

Please send your **written** application by e-mail only, quoting the **reference number**, together with the usual application documents to **Technische Universität Berlin - Die Präsidentin - Fakultät IV, Institut für Technische Informatik und Mikroelektronik / FG Datenbanksysteme und Informationsmanagement, EN 7, Einsteinufer 17, 10587 Berlin** (one PDF file, max. 5 MB): **jobs@dima.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 guarantee 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/ or quick access 214041.

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.

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

Zertifikat seit 2008
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