



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; subject to funding approval being granted

Faculty II - Institute of Mathematics / Mathematical Modeling of Industrial Life Cycles

Reference number: II-581/24 (starting at 01/03/25 / limited until 29/02/2028 / closing date for applications 08/11/24)

Working field:

The position holder independently researches methods for testing and validating deep neural networks in the context of autonomous driving and develops methods for online monitoring and retrieval of corner cases in road scenes that could potentially pose a danger to an autonomously driven vehicle.

She*He conducts numerical experiments with deep learning frameworks such as PyTorch or Tensorflow for online monitoring of perception networks and evaluates the results statistically. She*He investigates experimental designs for ensuring the safety of neural networks under variable lighting conditions and in teacher-student configurations and implements these findings in numerical experiments. The position holder writes scientific papers on the topic of the "SafeAIEngineering" project and participates in the activities of the SafeAIEngineering consortium as part of the project. The candidate will also maintain the exchange with the industrial partners and other participants in the consortium and take on project management tasks.

Requirements:

- Successfully completed academic university degree (Master, Diploma or equivalent) in Mathematics
- Programming experience, preferably in Python
- Programming experience with deep learning frameworks such as PyTorch or TensorFlow and cluster computing
- Knowledge of statistical learning theory
- Good knowledge of German and/or English required; willingness to acquire the respective missing language skills

Qualifications desired:

- Knowledge in the field of Deep Learning
- Knowledge in the field of machine learning
- Ability to work in a team and good communication

For further information about the position, please contact Prof. Dr. Gottschalk (gottschalk@math.tu-berlin.de).

Please send your application with the **reference number** and the usual documents (combined in a single pdf file, max. 5 MB) **by email to Prof. Dr. Gottschalk (gottschalk@math.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.

Technische Universität Berlin - Die Präsidentin - Fakultät II, Institut für Mathematik, FG Mathematische Modellierung von industriellen Lebenszyklen, Prof. Dr. Gottschalk, Sekr. MA 5-4, Str. des 17. Juni 136, 10623 Berlin

The vacancy is also available on the internet at

<https://www.personalabteilung.tu-berlin.de/menue/jobs/>

