

## Call for applications: Student assistant (m/f/d) for demonstrator development and visualization (SHK / WHF)

The  
Lamarr Institute for Machine Learning and Artificial Intelligence  
at the Technical University of Dortmund, Faculty of Computer Science  
is looking for

a committed and technically interested student assistant (m/f/d), for the development and construction of demonstrators and exhibits for the visualization of machine learning methods and their application, e.g. in physics at the IceCube detector.

The offer is aimed at students of the TU Dortmund University and University of Applied Sciences Dortmund (or comparable institutions) with experience in 3D printing / CAD, electronics and microcontroller programming. A professional background in computer science, machine learning and artificial intelligence is not necessary but helpful. The number of hours can be discussed individually.

Area of responsibility:

The main task of the position is to support our research assistants in the development and construction of exhibits and demonstrators for the visualization of machine learning methods and their application. A first concrete task is to support the construction of a model of the IceCube neutrino detector with visualization of the neutrino events by means of addressable LED stripes and augmentation of ML predictions on these events.

In this context, we are looking for support in the following tasks:

- Design (z.B. 3D models, CAD drawings) and assembly of the exhibit (e.g. assembly of the LED strips in PMMA tubes, assembly of the tubes, planning, design and assembly of the tube bracket and substructure)
- Development of the associated electronics (e.g. soldering)
- Programming of the associated microcontrollers and single-board computers

After completion of the IceCube demonstrator, further exhibits are being planned.

## Requirements:

- Enrolment at the Technical University of Dortmund, Dortmund University of Applied Sciences or a comparable institution, for example with a background in mechanical engineering, electrical engineering, physics or computer science.
- Basic knowledge in the field of electronics and 3D design.
- Ideally, further knowledge of programming microcontrollers and Python.
- High level of independence, initiative, reliability and ability to work in a team
- Technical skill and careful way of working
- Ideally, an interest in machine learning and artificial intelligence topics. However, specialist knowledge is not necessary
- Possibility to work in presence in Dortmund

## We offer:

- An exciting job in a dynamic and innovative environment in one of the most important research areas in Germany at the moment
- The opportunity to participate in the promising research field of machine learning methods and thus expand your own job profile.
- Flexible working hours that can be easily combined with your studies (e.g. before exams)
- The opportunity to gain valuable experience in the field of design, electronics and programming.
- Long-term cooperation (further demonstrators are planned)
- Good transport connections
- A friendly and motivated team that looks forward to your support

## Application:

Please send your detailed application, including your CV and the usual relevant documents (e.g. copies of certificates, academic achievements), as a PDF by e-mail to:

[jens.buss@tu-dortmund.de](mailto:jens.buss@tu-dortmund.de).

If you have any questions, please do not hesitate to contact us.

We look forward to receiving your application documents.

Further information about our institute, its research areas and activities can be found at <https://lamarr.cs.tu-dortmund.de> (Lamarr Institute, Dortmund site) or <https://lamarr-institute.org/> (Lamarr Institute, General).