

Hier
entsteht
Zukunft!



UNIVERSITÄT
DES
SAARLANDES

Foto: Oliver Dietze



Saarland University is a campus university that is internationally recognized for its strong research programmes. Fostering young academic talent and creating ideal conditions for teaching and research are a core part of the university's mission. As part of the University of the Greater Region, Saarland University enables students and staff to share and exchange knowledge and ideas between disciplines, between universities and across borders. With over 17,000 national and international students, studying more than a hundred different academic disciplines, Saarland University is a diverse and dynamic learning environment. [Saarland University is officially recognized as one of Germany's family-friendly higher-education institutions and with a combined workforce of more than 4,000 it is one of the largest employers in the region.]

The Ubiquitous Media Technology Lab of Prof. Dr.-Ing. Antonio Krüger (Saarland Informatics Campus) is inviting applications for the following position, expected to start **01 November 2026**.

Doctoral Research Position (m/f/x)

Reference number W2896, salary in accordance with the German TV-L salary scale¹, pay grade: E 13 TV-L, duration of employment: 3 years (fixed-term), volume of employment: 100 % of standard working time.

Workplace/Department:

Ubiquitous Media Technology Lab, Saarland Informatics Campus, Saarbrücken

Job requirements and responsibilities:

Can technology learn to listen to how athletes feel, and not just to what the sensors measure?

In the ASPIRE project, we develop knowledge for the new generation of sports tracking technology that integrates athletes' subjective experiences (such as perceived exertion, motivation, enjoyment and fatigue) with objective physiological and biomechanical data. ASPIRE is a collaboration between Saarland University and the University of Twente (Netherlands), funded under the DFG-NWO WEAVE programme.

As a doctoral researcher, you will be responsible for the machine-learning and data-science side of the project. You will design the system architecture and computational models that turn multi-modal data into timely, explainable feedback: a backend and APIs for heterogeneous data streams, an athlete state model that predicts future athlete states, and a recommendation engine that generates adaptive training and feedback suggestions. You will train and evaluate these interpretable models on data collected in real-world studies.

This role therefore calls for strong programming skills (e.g. in Python) and experience with data pipelines, APIs and backend development. An interest in human-centered computing, wearables and sensing — and ideally in sports, health or physiological data — will help you connect the technical work to the athletes it serves. As ASPIRE is an

¹ TV-L = collective agreement on remuneration of public sector employees in the German *Länder*

inherently interdisciplinary and international project, we are looking for someone who brings enthusiasm for collaborating with HCI researchers and sports scientists, along with a commitment to rigorous, ethical and reproducible research.

You will work closely with a postdoctoral researcher at the University of Twente (Netherlands) who focuses on the human-computer interaction side, and you will help coordinate the joint work across the two teams. The position offers a strong publication trajectory at leading venues (e.g. CHI, UIST, UbiComp, RecSys, SportsHCI) and a stimulating international research environment at the Ubiquitous Media Technology Lab.

Your tasks:

- Design and implement backend infrastructure and APIs for acquiring and storing heterogeneous, multi-modal data (past activities, physiological and psychological data), in compliance with data-protection regulations.
- Develop methods that predict future athlete states using interpretable machine learning.
- Build a recommendation engine that delivers adaptive, explainable training and feedback suggestions.
- Integrate the computational models with user interfaces, support in-the-wild data collection, and train and refine the models on the resulting data.
- Publish and present results at leading international conferences and contribute to open datasets and dissemination.

Your academic qualifications:

- Completed scientific university studies in computer science, data science, or a closely related field (Master's degree or equivalent)
- A solid background in machine learning and data science; experience with interpretable models (e.g. regression, random forests, gradient boosting, case-based reasoning) is an advantage.

The successful candidate will also be expected to:

- collaborate closely with the partner team at the University of Twente (Netherlands) and help coordinate the joint work packages;
- be willing to travel for project meetings with the Dutch partner several times during the project;
- contribute to the supervision of student assistants and to project dissemination and outreach;
- pursue and complete a doctoral degree (Dr.-Ing. / PhD) within the framework of the project.
- have an excellent command of English, both written and spoken.
- have a basic knowledge of German (but is not strictly required)

What we can offer you:

- The opportunity to pursue a doctoral degree within the framework of the project
- Secure and future-oriented employment with attractive conditions
- A broad range of further education and professional development programmes (for example language courses)
- An occupational health management model with numerous attractive options, such as our university sports programme
- Supplementary pension scheme (RZVK)
- Discounted tickets on local public transport services ('Job-Ticket' of the saarVV)
- Job bike leasing (JobRad)
- A flexible work schedule allowing you to balance work and family, among other things the possibility of teleworking

We look forward to receiving your **meaningful online application** (in a PDF file) by **14 August 2026** to felix.kosmalla@uni-saarland.de. Please include the reference number **W2896** in the subject line of the e-mail. Interviews will take place in the week of August 24, 2026.

If you have any **questions**, please contact us for assistance. Your contact:

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Pay grade classification is based on the particular details of the position held and the extent to which the applicant meets the requirements of the pay grade within the TV-L salary scale. Part-time employment is generally possible.

If you have obtained a foreign university degree, a proof of the equivalence of this degree with a German degree by the Zentralstelle für ausländisches Bildungswesen (ZAB) is needed before hiring. If necessary, please apply for this in time. You can find more information at <https://www.kmk.org/zeugnisbewertung>.

Unfortunately, neither costs for attending an interview at Saarland University nor costs for any certificate evaluation by the ZAB can be reimbursed in principle.

We welcome applications regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, and sexual orientation and identity. In accordance with its policy of increasing the proportion of women, the University actively encourages applications from women. Applications from severely disabled persons will be given preferential consideration in the event of equal suitability.

When you submit a job application to Saarland University you will be transmitting personal data. [Please refer to our privacy notice for information on how we collect and process personal data in accordance with Art. 13 of the Datenschutz-Grundverordnung](#). By submitting your application you confirm that you have taken note of the information in the Saarland University privacy notice.