Open-Topic Doctoral Positions (m/f/d; TVöD E13, 80%)

The Helmholtz Institute for Human-Centered AI (HCAI) in Munich is seeking to fill **two doctoral (PhD) positions** in the area of **human and machine learning**. The expected start date is **June 1, 2026**, but earlier/later starts are possible by agreement.

The positions are **fully funded within our institute budget** and will be offered as **TVöD E13 (80%)** contracts.

Research focus (open topic):
You will join our lab to work on computational approaches to intelligence, bridging cognitive science and machine learning (and, where useful, neuroscience). Projects are **open-topic within our scope**. We encourage you to bring your own ideas and develop them together with the team into a well-scoped PhD project.

Examples of suitable directions include (but are not limited to):

- **Foundation models of human learning and decision-making**
- **Cognitively inspired machine learning**
- **Automated / open-ended discovery of cognitive models**
- **Continual learning in humans and machines**

Supervision and collaboration:
Doctoral researchers will be supervised primarily by **Dr. Eric Schulz** and closely supported by postdoctoral researchers in the group. Depending on the project, **co-supervision and research visits** with external collaborators are possible. Current and former lab members have visited and/or gone on to positions at places including **Harvard**, **Princeton**, **Oxford**, **and UCL**.

What we are looking for:
We welcome applications from candidates with a strong quantitative background and a genuine interest in connecting human and machine intelligence. In line with institutional hiring policies, applicants should hold a **Master's degree (or equivalent)** in cognitive science, computer science, machine learning, neuroscience, psychology, statistics, physics, or a related computational/quantitative field. You should also have:

- **Solid programming skills** (e.g., Python; experience with ML tooling is a plus)
- Experience with at least one of the following: **empirical research**, **computational modeling**, **machine learning**, or **data-intensive projects**
- Evidence of **independence**, **initiative**, **and good scientific judgment** (e.g., thesis, projects, publications in relevant venues, open-source projects)

Experience with **large language models** and/or modern deep learning workflows is a strong plus.

If you are unsure whether you are a good fit, please **err on the side of applying**: we value diverse backgrounds and trajectories and will consider applications holistically.

What we offer:

- **TVöD E13 (80%)** contract with an initial term of **3 years**, extendable until completion of the PhD
- An **interdisciplinary team** of cognitive scientists, neuroscientists, and computer scientists
- Access to **large-scale compute** through the Helmholtz ecosystem (high-performance compute resources suitable for intensive modeling and ML)
- A research culture that values **rigor**, **openness**, **and collaboration**, and also enjoys table football, cake at lab meetings, retreats, joint lab meetings, and hackathons

About the group:
We develop computational models of intelligence. We study **human intelligence** using rich environments and tools from machine learning, and we study **machine intelligence** using cognitive experiments and insights from human cognition. Our methods include cognitive experiments, computational modeling, interactive games, machine learning, and natural language processing.
More information: hcai-munich.com

Selection process:
Our selection process is designed to be **thorough, fair, and transparent**. Shortlisted candidates will typically be invited to (i) a brief interview, and (ii) a research conversation with several lab members. We value input from across the group and aim to make decisions that reflect both scientific fit and a supportive working environment.

How to apply:
Please email the following materials (preferably as a single PDF):

- A **cover letter** (**max. 1 page**): your background, why this position sparked your interest, and 1–2 research directions you are excited about
- **CV**
- **Academic transcripts/certificates**
- A **one-page description of research interests** (ideas, methods you bring, and what you would like to learn)
- Names and email addresses of **two referees**

Send your application to eric.schulz@helmholtz-munich.de. If you have questions about fit, potential projects, or the application process, feel free to get in touch.

Equal opportunity statement:
We are committed to fostering an inclusive and respectful work environment. We especially welcome applications from individuals from groups underrepresented in our field. The Helmholtz Association aims to increase the number of women in areas where they are underrepresented and therefore explicitly encourages women to apply. We also encourage applications from qualified individuals with disabilities.

Review timeline:
Applications received by **March 2, 2026** will receive full consideration. Review will continue until the positions are filled.