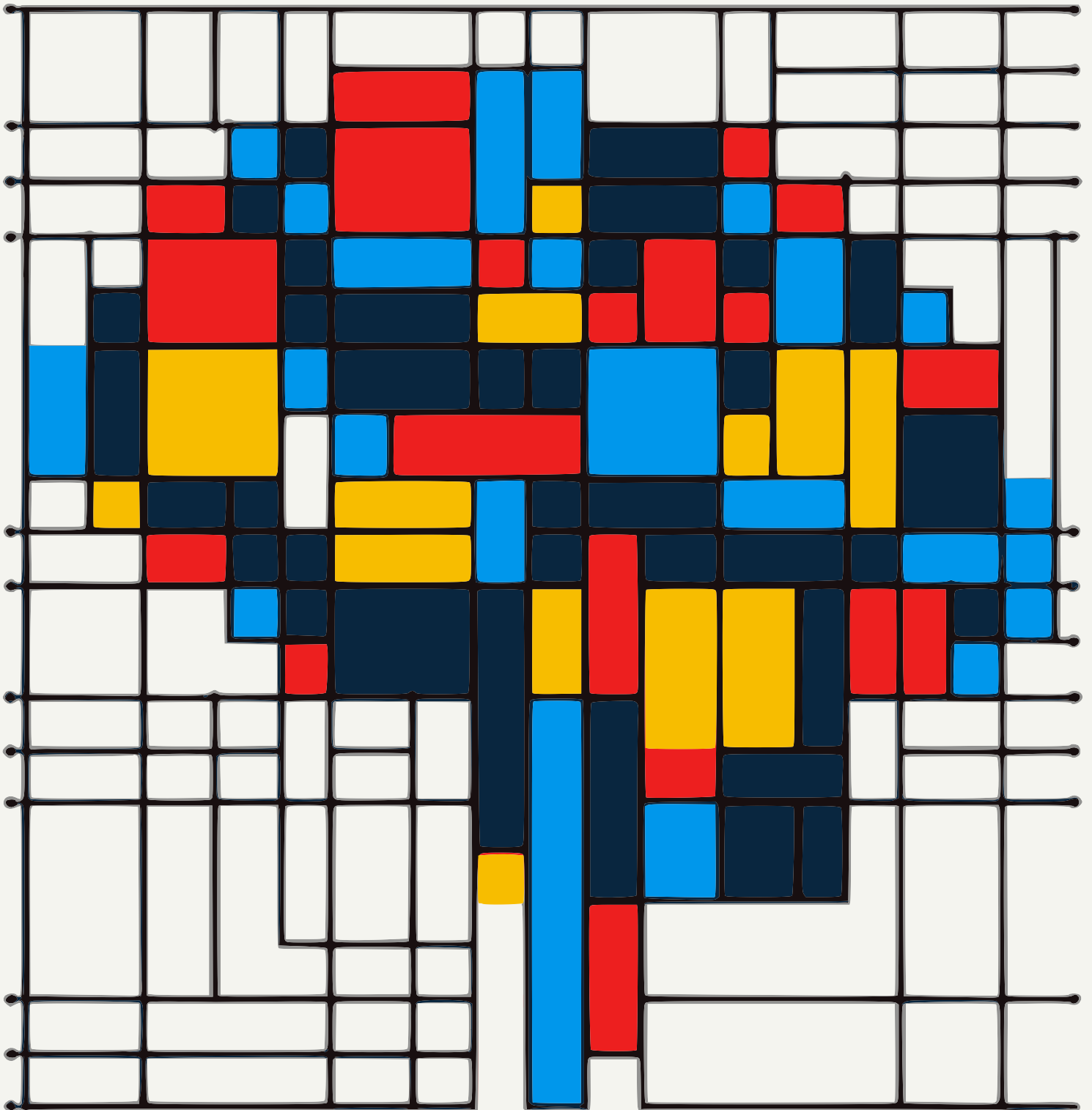# UNDERSTANDING INTELLIGENCE

Helmholtz Institute for Human-Centered AI

Open PhD positions in Munich
Apply by March 22nd

About the positions

Join our lab to work at the intersection of computational cognitive science and machine learning. The Institute for Human-Centered AI at the Helmholtz Center in Munich seeks to hire two PhD researchers for 3+ years. One will work on a **foundation model for the cognitive sciences**, while the other will work on **cognitively-inspired machine learning**. The starting date can be at any time in 2024.

In the first project, we want to build and refine a model that can make predictions for any participant when doing any cognitive task. The model will be based on training neural networks on cognitive experiments. Eventually, we would like to expand this model to the domains of computational psychiatry and developmental psychology. This project would be a good fit for someone coming from the cognitive sciences with an interest in applying tools from machine learning to data from this field.

In the second project, we want to use insights from cognitive science to build better machine learning models. These models could have priors for simplicity or emerge from training on human-like environments. This project would be a good fit for someone coming from the computer sciences with an interest in gaining more knowledge about cognitive science and how it relates to intelligent behavior.

We are seeking two motivated PhD candidates who are not only passionate about research but also equipped to drive scientific innovation. Here is what makes you the perfect fit for our team:

- **Academic Excellence:** You hold a Master's degree in Cognitive Science, Machine Learning, Computer Science, Neuroscience, Psychology, or a related computational field, demonstrating your strong foundation and readiness to tackle complex challenges.

- **Technical Proficiency:** Your programming skills are robust, complemented by a solid mathematical foundation. You are adept or motivated to learn languages and frameworks such as PyTorch, TensorFlow, JavaScript, or R.

- **Research Experience:** You have a track record of engaging in empirical research. Previous successful research projects highlight your ability to navigate the intricacies of our domain. We do not necessarily expect your experience to be reflected in the form of a publication.

- **Independence and Drive:** You are self-motivated and pursue research questions with diligence and creativity. You are eager to learn, explore, and expand your horizons.

- **A Commitment to Diversity:** We believe that innovation thrives on diversity. We strongly encourage applications from underrepresented groups in science. Your unique perspective is what makes our team stronger. If you identify with a group that has historically been underrepresented in science and technology, we especially want to hear from you.

If you are looking to make a significant impact in the fields of computational cognitive science and machine learning, we want you. Bring your skills, your passion, and your vision to our team.

Why join us?

Joining our lab is not just about pushing the boundaries of scientific knowledge. It is a launchpad for your career, a place where your work makes an impact, and where diversity is appreciated and nurtured. We work together and we have fun together. We root for and support each other. Most importantly, however, we care about both the quality of our work and the kindness of our actions. Here is a glimpse of what makes this opportunity unlike any other:

- **Personalized Mentorship:** Thrive under the guidance of your supervisor with guaranteed weekly one-on-one sessions that ensure your project not only progresses but soars. You will also team up with other PhD and postdoctoral researchers of our large research group.

- **Global Collaboration:** Collaborate with a dedicated postdoc within our group and enjoy the privilege of co-supervision by researchers from institutions such as Harvard, MIT, UCL, or DeepMind.

- **A Rewarding Journey:** We know good work is only possible with appropriate compensation. Our remuneration package (E13-75%) is competitive, especially when compared to other countries.

- **International Environment:** We are a group of international researchers based in Munich, an international and multi-cultural city. Knowledge of German is not required to live and work here.

- **Inclusive Decision Making:** We are committed to fostering an academically enriching and supportive climate for all members of our lab and institute. We hold the mission of promoting diversity and inclusion as a core value and make all decisions jointly as a lab.

- **Beyond Research:** Engage in enriching experiences from attending summer schools, and participating in extended lab visits, to honing your skills in supervising students.

- **Having Fun:** In our lab, fun and science go hand in hand. Whether it is challenging each other to a game of table tennis, embarking on a hike during lab retreats, or celebrating our achievements with a delicious cake, we cherish these moments that bring us closer as a team.

- **Proven Success:** Join a lineage of excellence; our alumni have received offers to do postdocs at prestigious universities in both Europe and the US.

If you would like to join us, then please email a cover letter, CV, unofficial transcripts, a short description of your research interests, and the contact details of 2 referees **to eric.schulz@helmholtz-munich.de by March 22nd, 2024**. If you have any questions, please do not hesitate to contact us directly.