

RESEARCHER IN FOUNDATION MODELS WITH A FOCUS ON AGENT SYSTEMS/MULTI-AGENT SYSTEMS

The Lamarr Institute is one of Germany's six AI Centers of Excellence and focuses on the research and development of high-performance, trustworthy, and resource-efficient applications of Machine Learning (ML) and Artificial Intelligence (AI).

The Foundation Models Research Lab (FMR-Lab), led by Dr. Mehdi Ali, is seeking one or more highly motivated researchers to develop the next generation of agent systems/multi-agent systems at the Lamarr Institute location at the University of Bonn. Specifically, the research is aimed to improve the **tool-usage capabilities, planning capabilities, reasoning capabilities** of agent systems, and **synthetic data generation** for agent systems.

The FMR-Lab is involved in national and international projects to develop large European foundation models, including **TrustLLM, OpenEuroLLM, and SOOFI**. These projects involve training large foundation models from scratch using several million GPU hours and thousands of GPUs.

Research Topics

- Improving the tool-usage capabilities of agent systems
- Improving the planning capabilities of agent systems
- Improving the reasoning capabilities of agent systems
- Synthetic data generation for agent systems

Requirements

- Excellent master's degree or PhD in computer science, mathematics, physics, or a related field
- Deep understanding of machine learning
- Excellent programming skills, especially in Python and PyTorch
- Basic understanding of distributed machine learning
- Ability to collaborate in teams

What to Expect

- Top-level research within a first-class research environment

- Support for your individual development
- Highly collaborative team environment
- Access to state-of-the-art infrastructure for effective training of foundation models
- Participation in pioneering national and international projects on foundation models, including TrustLLM and SOOFI.

Application

If you are interested in this challenging and forward-looking research, please send your complete application documents (CV, cover letter, and relevant certificates) to doelp@iai.uni-bonn.de. We look forward to welcoming talented and dedicated researchers to our team. Applications will be reviewed on a rolling basis until all positions are filled.

Position:

PhD Position or Postdoc: TV-L E13 100%

Duration: 3 years

Start date: Flexible, preferable 1 May 2026

Location: Bonn, Germany

We value and actively promote diversity in our team and therefore welcome all applications – regardless of age, gender, nationality, ethnic and social background, religion, worldview, disability, sexual orientation, or identity. Applications from women and non-binary candidates are explicitly encouraged. Applicants with severe disabilities will be given preference in the case of equal qualification and professional performance. Our tasks are diverse and adaptable – for applicants with disabilities, we will jointly find solutions that optimally foster their abilities.

For questions about this position, please contact the Lamarr Institute Managing Director at the University of Bonn, Dr. Brendan Balcerak Jackson (bbalcera@cs.uni-bonn.de).