Are you a researcher in science, technology, engineering, or math with a deep technical interest and a passion for AI? Join us on the road to Exascale! Our "Simulation and Data Lab Applied Machine Learning" applies Machine Learning at the largest scales. As part of our exciting projects we develop novel AI methods for scientific research, collaborating with other scientists and their data. In parallel, we work on scaling AI methods for images, text, and other modalities. We are especially excited about JUPITER, Europe's first Exascale computer, currently being installed in Jülich. Over the coming years, we will develop algorithms to scale up ML workflows on this groundbreaking machine. We will train Large Language Models and powerful Diffusion Models, building new tools to drive scientific breakthroughs.

Join our team to the next possible date as

HPC Researcher - AI Support on Exascale

Your Job:
In this position, you will be an active part of our "Simulation and Data Lab Applied Machine Learning". Within national and European projects, you will drive the development of cutting-edge Machine Learning applications on the Exascale computer JUPITER. Your work will include:
- Developing, implementing, and refining ML techniques suited for the largest scale
- Parallelizing model training and optimizing the execution
- User support in the field of large-scale AI
- Diving deep into technical aspects of efficiency, parallelization, and benchmarking
- Engaging in national and international ML/DL communities, most importantly in helmholtz.ai, the Helmholtz Artificial Intelligence Cooperation Unit: https://www.helmholtz.ai
- Presenting research results at scientific meetings, conferences, and as scientific papers
- Contributing to educational events, such as courses and hackathons

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our
Online-Recruitment-System!

Questions about the vacancy?
Get in touch with us by using **our contact form.**
Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

Your Profile:

- Excellent Master or PhD degree in Computer Science, Mathematics, Physics, or similar fields
- Good knowledge of AI and applied Machine Learning
- Hands-on experience with High Performance Computing Systems
- Basic knowledge of System Architecture of Supercomputers and NVidia-GPUs
- Practical experience with ML/DL workflows and common software libraries
- Your experience should be documented in research papers and Open Source code projects
- Self-motivated personality with a curiosity for working in a multidisciplinary team environment on scientifically challenging problems
- Excellent proficiency in written and spoken English
- German is an advantage

The PhD degree is not a prerequisite for application. It is possible to do a PhD in this subject area during employment.

Our Offer:

We work on highly topical, socially relevant issues and offer you the opportunity to actively shape change! You can expect a wide range of opportunities:

- MEANINGFUL TASKS: The position offers a varied and diverse role at the forefront of research in an international and interdisciplinary working environment
- RESEARCH & INFRASTRUCTURE: You will have access to state-of-the-art and unique supercomputer systems, including JUPITER, Europe's first exascale system, as well as quantum computers
- FLEXIBILITY: Flexible working time models, including options close to full-time (https://go.fzj.de/near-full-time), allow you to tailor your working hours to suit your individual needs
- WORK-LIFE BALANCE: The option of flexible working (in terms of location) is generally available after consultation and in line with upcoming tasks and (on-site) appointments
- VACATION: You will receive 30 days of vacation plus additional days off (e.g. between Christmas and New Year`s)
- PERSPECTIVE: The position is initially limited to a 2-year fixed-term contract.
- FAIR REMUNERATION: Depending on your existing qualifications and the tasks assigned to you, you will be classified in pay grade 13-14 of the TVöD-Bund (Collective Agreement for the Public Service). All information on the TVöD-Bund collective agreement can be found on the BMI website: https://go.fzj.de/bmi.tvoed The monthly salaries in euros can be found here: https://go.fzj.de/bmi.tvoed.entgelt

In addition to exciting tasks and a collegial working environment, we offer you much more: https://go.fzj.de/benefits

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

The following links provide further information on diversity and equal opportunities: https://go.fzj.de/equality and on specific support options: https://go.fzj.de/womens-job-journey