



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

The Jülich Supercomputing Centre (JSC) operates one of the most powerful computer systems for scientific and technical applications in Europe and makes it available to scientists at Forschungszentrum Jülich, in Germany, and across Europe for research purposes via an independent review process. As part of this task, the JSC carries out research and development work in the fields of technology, HPC systems, communication, highly scalable data science, mathematics and application support. The "Large-Scale Data Science department" develops highly scalable methods and tools for data management and analysis, as well as for integrating data and computer resources into federated infrastructures with a focus on the upcoming exascale era. The tools and methods are developed and tested in collaboration with users in selected scientific domains in order to offer generic solutions to a large number of scientific communities.

Join our team to the next possible date as

Research Scientist — AI for Earth Observation

Your Job:

In this position, you will be an active member of our "Simulation and Data Lab for AI and Machine Learning in Remote Sensing", which aims to strengthen interdisciplinary research by bridging satellite remote sensing applications with large-scale AI, high-performance, and innovative computing. Within national and European projects, you will collaborate with our partners and drive the development of cutting-edge applications of foundation models for Earth observation on the JUPITER AI Factory (JAIF). As the only AI Factory with an exascale supercomputer, JAIF offers unique opportunities for training and deploying AI models in Europe. Specifically, you will:

- Design, optimize, and operate inference and fine-tuning workflows for foundation models in EO
- Implement models on JAIF's infrastructure and build reliable, reproducible data flows for large EO datasets and workflows
- Lead performance engineering (parallelization, optimization, benchmarking) for

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

adaptation and inference at scale

- Work closely with industry partners and public agencies; provide expert user support for JAIF
- Publish in peer-reviewed venues and present results at scientific meetings
- Contribute to educational activities (courses, hackathons, community events)

Your Profile:

- Excellent Master or subsequent PhD degree in Computer Science, Mathematics, Physics, or similar fields and industry experience
- Strong software-engineering fundamentals and hands-on experience with HPC systems; parallel/distributed programming and/or solid UNIX skills
- Proven experience operating Machine Learning (ML) in production. Able to design, automate, and maintain end-to-end ML lifecycles, including reproducible training/fine-tuning runs and experiment tracking
- Evidence of impact through publications and/or open-source contributions
- Self-motivated personality with a curiosity for working in a multidisciplinary team environment on scientifically challenging problems
- Very good command of written and spoken English is required to facilitate clear and effective communication within our global research environment

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:

- **INNOVATION & TECHNOLOGY:** Work on frontiers of scientific and technological challenges with access to cutting-edge and unique supercomputing systems including Quantum Computers and JUPITER, the first Exascale computer in Europe
- **KNOWLEDGE & FURTHER TRAINING:** Your professional development is important to us – we provide targeted, individual support
- **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
- **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
- **LEAVE:** You will receive 30 days of leave plus additional days off (e.g. between Christmas and New Year's Day)
- **FAIR REMUNERATION:** Depending on your existing qualifications and the tasks assigned to you, you will be classified in pay grade 13 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.tvloed> The monthly salaries in euros can be found here: <https://go.fzj.de/bmi.tvloed.entgelt>
- **FIXED-TERM:** The position is limited to 2 years
- **SUPPORT FOR INTERNATIONAL EMPLOYEES:** Our International Advisory Service makes it easier for international employees to get started

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>