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

AI Systems and MLOps Engineer 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 and operational services by bridging satellite remote sensing applications with large-scale AI, high-performance and innovative computing. You will focus on the deployment, operation, and scaling of AI inference services for Earth observation, working at the interface between supercomputing and operational AI. The core of the job is to make AI models reliable, maintainable, and accessible to users via 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. You will work closely with our researchers and international partners (industry and public agencies) to turn research AI models into production-grade services running on modern HPC and cloud-style infrastructure.

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

Specifically, you will:

- Design, deploy, and operate scalable inference and fine-tuning services for geospatial foundation models on JAIF, including performance optimisation and reliability at scale.
- Build and maintain container- and cluster-based environments for AI model serving, with appropriate monitoring, logging, alerting, and deployment pipelines (versioning, promotion, rollback, reproducibility).
- Implement data and model workflows for large EO datasets, covering pre-processing, model serving, post-processing, integration with data access layers, and delivery to users.
- Develop and document clean, stable APIs and interfaces that enable non-technical users to access AI services and integrate them into their operational workflows.
- Contribute to engineering best practices (CI/CD, automated testing, documentation, shared tooling), and to open-source projects, technical reports, publications, presentations, and educational activities (courses, hackathons, community events).

Your Profile:

- Excellent Master's degree or PhD in Computer Science, Software Engineering, Data Science, or a related field.
- Proven hands-on experience in industry (e.g. tech company, start-up, applied research lab delivering services to external users) working on production machine learning systems and MLOps workflows.
- Strong programming skills in modern languages, solid experience with Linux environments, containerisation, version control, and deployment and operation of services on high performance computing systems or cloud infrastructure (including GPU-accelerated workloads).
- Practical experience with modern deep learning frameworks, model serving in production, and building end-to-end data and model pipelines (including basic monitoring, experiment tracking, and model lifecycle management).
- Experience with Earth observation or other geospatial data is beneficial but not required.
- Evidence of impact through publications and/or open-source contributions.
- Self-motivated personality with interest to work in a multidisciplinary team 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 the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:

- A HIGH-IMPACT ROLE: An exciting and varied role at the forefront of research in an international and interdisciplinary working environment
- A LEADING ENVIRONMENT: 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
- PROFESSIONAL GROWTH: Comprehensive training courses and individual opportunities for personal and professional further development
- HEALTH & WELL-BEING: Your health is important to us. You can look forward to a comprehensive occupational health management program with a wide range of offerings - e.g., a beach volleyball court, running groups, yoga classes, and much more. In addition, our company medical service and an experienced social counseling team are available to assist you on site
- WORK-LIFE BALANCE: Optimal conditions for balancing work and private life, as

well as a family-friendly company policy. 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)
- 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 on page 69 of the PDF download.

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

We offer you an exciting and varied role in an international and interdisciplinary working environment. The position is initially for a fixed term of 2 years. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund) depending on the applicant’s qualifications and the precise nature of the tasks assigned to them.