

Postdoctoral Researcher in Geospatial AI & Earth Observation

Location: KTH Royal Institute of Technology, Stockholm, Sweden

Duration: 2 Years (Full-time position with possibility of extension)

Host Department: Department of Real Estate and Construction Management & Digital Futures

About the Position

Are you a driven early-career researcher passionate about pushing the boundaries of **AI, Earth Observation, and Spatial Data Science**? Join us at **KTH Royal Institute of Technology** for a 2-year postdoctoral fellowship at the cutting edge of Geospatial AI.

This position offers a unique opportunity to lead methodological breakthroughs in **Physics-Informed Deep Learning, Spatial Foundation Models, and Resource-Efficient (Green) AI**. You will work within a high-impact, intersectoral ecosystem.

Key Responsibilities & Research Directions

- **Next-Generation Geospatial AI:** Research and develop novel spatiotemporal deep learning models to unify dynamic satellite EO archives and high-resolution terrestrial spatial data.
- **Physics-Informed & Green AI Paradigms:** Embed physical constraints and explore resource-efficient training algorithms (e.g., Forward-Forward learning) to overcome computational bottlenecks and reduce carbon footprints.
- **High-Performance Computing:** Train and deploy multi-modal foundation models.
- **Interdisciplinary Collaboration:** Engage with top researchers, data engineers, and urban decision-makers to transform satellite intelligence into real-world societal impact.

What We Are Looking For

- **Education:** A Ph.D. degree (or close to completion) in Geospatial Information Science, Computer Science, Geodesy, Remote Sensing, Data Science, Applied Mathematics, or a related field.
- **Technical Skills:** Strong background in Deep Learning (PyTorch/TensorFlow), GeoAI/Spatial Data Analytics, and multi-modal data fusion.
- **Bonus Qualifications:** Experience with Physics-Informed Neural Networks (PINNs), Green AI algorithms, satellite imagery processing (Copernicus Sentinel data), or high-performance supercomputing environments.
- **Soft Skills:** Excellent track record of scientific publication, problem-solving mindset, and strong collaborative skills in an international context.

What We Offer

- **Top-Tier Research Environment:** A position at KTH—one of Europe's leading technical universities—embedded within **Digital Futures**, Sweden's flagship research center for digital transformation.
- **State-of-the-Art Resources:** Full access to national GPU supercomputing clusters (NAISS) and cutting-edge geospatial datasets.
- **Career Development:** Ample funding for international conferences, workshops, and networking, designed to establish your academic independence and leadership.
- **Future Prospects:** Fixed 2-year contract with **the potential for extension** based on performance and ongoing research funding.
- **Excellent Living Standards:** Competitive Swedish post-doc salary, full social security benefits, paid parental leave, healthcare, and high quality of life in Stockholm.

How to Apply

Interested candidates should submit:

1. Cover letter detailing research interests and motivation.
2. Curriculum Vitae (CV) including a full list of publications.
3. Brief research statement outlining relevant expertise.
4. Contact information for two academic references.

Contact: Dr. Jingbin Liu, Email: jingbin@kth.se

Equal Opportunity Employer: KTH is committed to gender equality and diversity. We encourage applications from underrepresented groups in technical disciplines.