Geography According to Foundation Models

Tartu, Tuesday 16 June 2026

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Topic(s) and focus

Workshop topics will include but are not limited to:

- **Ethics of GeoAI**
  - Geo-diversity
  - Representation bias
  - Fairness
  - Brittleness
  - Geo-alignment of AI systems
- **GeoAI and Foundation Models (FM) Representations**
  - Geospatial foundation models and their applications
  - Alignment of multi-model models
  - (Ethical issues in) spatial representation learning
  - Explicit versus implicit geo-knowledge in FM
  - Neurosymbolic approaches to improve representation
- **Evaluation, Case Studies, and Governance**
  - (Agentic) GeoAI benchmarks
  - Topological reasoning in LLM and text-to-image models
  - Transparency and accountability of GeoFM
  - Reproducibility and validation of GenAI and GeoAI research
- **Geographical Principles and Theories in AI Systems**
  - Alignment between GIScience concepts and AI representations
  - Place-based reasoning versus abstract spatial reasoning

Objective(s)

Within just a few years questions of AI ethics have moved from the periphery to being among the most central and most urgent topics in all of AI research. Yet, there are very few events that discuss ethical issues of GeoAI as their main objective. Thus, this workshop aims to:

- Highlight the role geography and geographical information science play in the development of AI methods, application, and the **ethics** of their deployment.
- Provide a venue for the community to share works, discuss ideas, and build collaborations in the emerging topic of (geospatial) foundation models and **responsible** GeoAI and GeoFM.
- Build an interdisciplinary and international network of researchers and practitioners from all career stages working on the topics on “Geography according to Foundation Model” from diverse perspectives.

- Inform GIScience researchers and practitioners about existing issues, best practice, emerging methods, and tools to quantify and mitigate GeoAI bias and other ethical issues (e.g., privacy, sustainability).

Planned outcome(s)

- An online proceeding of the selected papers will be published at CEUR-WS (ceur-ws.org).
- Discussions from the workshop will be documented, organized, and shared as a whitepaper by all (interested) participants. This might further lead to a collective journal paper (or special) depending on participants' joint interest. We have done so successfully before.
- While we will have a paper session, the workshop is **NOT** intended as a mini-conference alongside AGILE but as a venue for interaction, tutorials, breakout groups, agenda setting, critical discussions, demonstrations of emerging research, and so on.

Workshop format

The workshop is scheduled for **3.5 hours.** We plan to allocate the time to **(1)** the brief presentations of accepted papers, **(2)** two invited speakers representative of the breath of the covered topics and perspectives (i.e., a technical speaker and one from the viewpoint of ethics of technology), **(3)** demos and tutorials of novel GeoAI ethics, methods, and tools (e.g., for bias quantification), and **(4)** a joint discussions (agenda setting).

Target audience

The target audience will include researchers and practitioners interested in neural GeoAI, classical knowledge engineering (such as geo-ontology engineering and geo-semantics), as well as in ethics and technology studies. The question of how frontier AI systems represent geographic reality and how they begin to co-shape this reality is also greatly relevant for geographers in general as well as those applying GeoAI, GenAI, or other forms of representation (learning) to their domains. Hence, and based on our prior events, we expect a high turnaround across subfields of GIScience.