

Call for Proposals for a session to be held at the Annual Conference of the Royal Geographical Society, Birmingham, 26 to 29 August 2025

Exploring the intersections of GeoAI, cartography, and Generative Artificial Intelligence

Geospatial Artificial Intelligence (GeoAI) draws from across disciplinary domains in that it situates itself in data science, environmental science and geography. It incorporates multi-modal geospatial data to inform use cases in policy such as environmental degradation and disaster management.

This session aims to explore these and other cross-disciplinary interstices among big data, large language models, Geographic Information Systems (GIS) and cartography. GIS education, which combines spatial analysis and cartographic design, represents a unique context in which Generative Artificial Intelligence tools can make a significant impact.

GIS education encompasses a variety of pedagogical approaches aimed at building both technical proficiency and spatial thinking (Duarte et al. 2022). Traditional methods are often complemented by laboratory-based learning, where students engage in hands-on exercises with GIS software like ArcGIS or QGIS, developing skills in spatial data manipulation, analysis, and visualization (Rickles and Ellul, 2015).

Contemporary approaches have integrated emerging technologies and pedagogies. For example, experiential learning incorporates fieldwork, enabling students to gather spatial data using GPS devices or drones. Additionally, the rise of WebGIS platforms and open data has democratized GIS education, making geospatial tools and datasets accessible to broader audiences (Ruibo, 2019).

This session is inspired by Muehlenhaus's cartographically-focussed Generative Pre-training Transformer (GPT).

Possible topics include (but are not limited to):

- Descriptions and case studies of GeoAI and / or large language models to GIS and cartography / cartographic education;
- Methodological approaches to such investigations; and
- Ethical implications of the use of IoT and Data Science in such investigations.

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Session organizer:

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Presenters are kindly invited to submit their proposals to the session organizer by the 28th of February 2025. Proposals should minimally comprise the title of the paper, an abstract (of up to 400 words), and full contact details.