

Call for Articles — Special Issue

Geographia Technica — "Artificial Intelligence Applications in Geography (AIAG)"

Dear colleagues,

We are pleased to invite submissions to a special issue of *Geographia Technica*, titled “Artificial Intelligence Applications in Geography (AIAG)”. This special issue brings together original studies that leverage Artificial Intelligence (AI) across physical and human geography—fully aligned with the journal’s profile focused on technical and quantitative approaches in geographical research.

Geographia Technica promotes the latest developments in GIS, Remote Sensing, mathematical methods applicable across the entire discipline, territorial and laboratory experiments, and advances generated by measurement techniques. Please consult the journal website for Aims & Scope, the Guide for Authors, and the manuscript submission page.

Indicative Topics

- Land cover classification and semantic segmentation (CNN/U-Net, Vision Transformers) from Sentinel/Landsat/MODIS imagery; change detection (wildfires, floods, desertification).
- Multisource fusion (Sentinel-1 SAR + Sentinel-2 optical + DEM), modeling rare classes and evaluation with AUC-PR, F1/IoU.
- Geohazards and risk: landslide/flood susceptibility mapping (Random Forest, XGBoost/LightGBM), interpretability (SHAP) and uncertainty quantification.
- Spatio-temporal series and forecasting (NDVI, SPI, LST): RF/LSTM/ConvLSTM, gap-filling, climate downscaling.
- Urban analytics: building/greenspace detection, urban heat islands, mobility and accessibility on OSM networks (GNN, isochrones).
- Geospatial NLP: topic modeling (LDA/BERT), NER and geocoding for planning/policy corpora.
- 3D mapping and advanced remote sensing: photogrammetry, LiDAR, AI-enabled reconstruction and monitoring.
- Ethics, bias, and reproducibility in geo-AI: spatial/temporal validation, model cards, uncertainty mapping.

Why this special issue—why now?

Between 2022 and 2025, the literature has seen a substantial rise in AI applications in geography. AIAG aims to consolidate this progress, compare classical and deep-learning approaches, and promote reproducible results on open datasets.

Types of Contributions

- Original research articles (empirical or methodological).
- Comparative studies (geostatistical baselines vs. ML/DL).
- Technical notes / datasets / reproducible protocols (with code).
- Policy-relevant or risk-management case studies.

Recommended Open Datasets (examples)

- Sentinel-1/2 (Copernicus), Landsat, MODIS; SRTM/ALOS DEM; JRC Global Surface Water; Copernicus Land Cover; ERA5/WorldClim; GHSL/WorldPop; OpenStreetMap.

Submission & Formatting

Manuscripts (English) should be submitted via the Geographia Technica website in .doc/.docx format, following the Guide for Authors. Please consult the website for editorial criteria, figure/table formatting, and any required agreements. Links are listed below.

Proposed Timeline (to be finalized by the Guest Editors)

- Manuscript reception until: 30 June 2026 (rolling submissions welcome)
- Peer review: ongoing; papers will be published online immediately upon acceptance
- Final assembled special issue: July 2026

Useful Links

- Aims & Scope: <https://technicalgeography.org/index.php/aims-and-scope>
- Guide for Authors: <https://technicalgeography.org/index.php/guide-for-authors>
- Submit a manuscript: <https://technicalgeography.org/index.php/submit-a-manuscript>
- Journal Archive: <https://technicalgeography.org/index.php/journal-archive>

Indexing (as listed on the journal website): CLARIVATE ANALYTICS, SCOPUS, GEOBASE, EBSCO, SJR, CABELL, ...

We look forward to your submissions!