Special Issue " GeoAI and Location Big Data for Smart Cities" in Journal Computers, Environment and Urban Systems

Background and Aims

The increasing use of location-based services, as well as the growing ubiquity of location/activity sensing technologies have led to a huge amount of location big data (LocBigData), such as tracking or sensing data (e.g., massive GPS trajectories of people and vehicles, and georeferenced mobile phone data), social media data (e.g., twitter), and crowdsourced geographic information. The growing availability of such data has created unprecedented opportunities for researchers from various disciplines. One of the emerging research fields that are significantly benefiting from LocBigData is GeoAI, which aims to seamlessly integrate geographic knowledge or concepts into AI to address geographical problems or beyond. The unprecedented research opportunities brought by LocBigData and GeoAI also come with new theoretical, technical, ethical, and social questions.

This special issue aims to provide a general picture of the state-of-the-art research in location big data and GeoAI, under the umbrella theme of smart cities. It will place emphasis on innovative research that addresses the challenges posed by modern cities from these geospatial perspectives.

The special issue will tap into the pool of submissions to the International Symposium on Location-based Big Data and GeoAI (LocBigDataAI 2023, https://lbs.icaci.org/locbigdata2023/), but it is also open to all interested scholars.

Topics

Example topics include (but are not limited to), the following:

- Acquisition, management, and analytics of location big data
    - Crowdsourcing and Internet of Things
    - Data management, cleaning, and integration
    - Geovisual analytics
    - Computational mobility and activity analysis
    - Descriptive, diagnostic, predictive and prescriptive analytics
- Geospatial artificial intelligence (GeoAI)
    - Big data analytics and machine/deep learning
    - Spatially explicit AI techniques
    - Geography/GIScience-guided AI
    - Explainable GeoAI
    - Integration of data- and theory-driven approaches
- Applications of location big data and GeoAI
    - Human spatial behavior, activity, and mobility
    - Place modelling and understanding
    - Transportation and traffic
    - Social network analysis
    - Public health
    - Smart and sustainable cities
- Social and ethical issues of location big data and GeoAI
    - Data quality and representativeness
    - Bias of LocBigData and GeoAI
    - (Geo)privacy and ethical issues
    - Social inequality across cyber and physical space
    - Governance of LocBigData and GeoAI

Important Dates

- Express of Interests (submitted your short abstract via the EasyChair link on https://lbs.icaci.org/locbigdata2023/): May 15, 2023

- Full Papers Due: November 15, 2023 (tbc)

Special Issue Guest Editors

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