

# Mengyue Yuan

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## Education

### Wuhan University

Sep. 2021 – Jun. 2024 (expected)

M.S. in Cartography and Geography Information System

GPA: 3.66/4.0, (90/100)

### China University of Geoscience, Wuhan

Sep. 2017 - Jun. 2021

B.E. in Geospatial Information Engineering

GPA: 3.92/5.0, Rank: 2/62

## Research Interests

Geospatial data mining, transportation geography, public health, social sensing

## Publication

- Yuan, M., Yue, P., Yang, C., Li, J., Yan, K., Cai, C. and Wan, C. **Generating lane-level road networks from high-precision trajectory data with lane-changing behavior analysis.** *International Journal of Geographical Information Science*, 2023. (accepted)
- Yuan, M., Liu, T. and Yang, C. **Exploring the Relationship among Human Activities, COVID-19 Morbidity, and At-Risk Areas using Location-Based Social Media Data: Knowledge about the Early Pandemic Stage in Wuhan.** *International Journal of Environmental Research and Public Health*, 2022.

## Research Experience

### Wuhan University, HPECIG Lab | Supervisor: Prof. Peng Yue

Jul. 2021 - Nov. 2023

- Developed innovative method for generating lane-level road networks from vehicle-based trajectory data, effectively addressing lane structure changes and lane-changing behavior interference. This method has been integrated into Changan Automobile Company's crowdsourced mapping application.
- Road network quality assessment and correction based on trajectory data.

### China University of Geoscience, GIRSA Lab | Supervisor: Asso. Prof. Chao Yang

May 2018 – Jun. 2021

- Characterized human activity patterns using location-based Weibo data of the early COVID-19 pandemic in Wuhan. Investigated the relationship between human activity patterns and COVID-19 morbidity using spatial analysis models. Revealed the transmission pattern within Wuhan city during the early pandemic stage.
- Data cleaning and processing for Sina Weibo Check-in data and selfies. Developed a deep learning-based model for detecting facial retouching in selfie images. Analyzed social media user check-in behaviors, trends, and spatial-temporal distribution patterns.
- Presentation. "When, where, and why social media users make up?" *The 16th Annual Conference on Theories and Methodology in Geographic Information Science in China*, Shanghai. 2019.

## Awards/Honors

- First Class Scholarship, Wuhan University. 2022
- Academician Scholarship, China University of Geoscience, Wuhan. 2020
- First Prize of the 8th National Student GIS Application Skill Contest. 2019
- Second Prize of the National Mathematical Contest in Modeling of Hubei Province. 2019
- Outstanding Student Leader Prize, China University of Geoscience, Wuhan. 2018

## Skills

Python • C/C++ • SQL • ArcGIS • ENVI • GeoDa