Zhang ChengBo

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Research interests: Spatial networks, Human mobility, Data mining, GeoAI

EDUCATION

Master of Urban planning   2023 - 2025

Harbin Institute of Technology (Shenzhen)

- ➢ Awarded the First-class academic scholarship
- ➢ Dissertation: "*Dynamic community structure mining and origin-destination flow imputation in on-demand delivery network*"
- ➢ Dissertation advisor: Dr. Zuopeng Xiao

B.E. in Urban and rural planning   2018 - 2023

Xiamen University

- ➢ Awarded the Merit Student honor for three consecutive years
- ➢ Awarded National Encouragement scholarship for three consecutive years

PUBLICATION

- ➢ Xiao, Z., **Zhang, C.***, Li, Y., & Chen, Y. (2024). Community park visits determined by the interactions between built environment attributes: An explainable machine learning method. *Applied Geography*, 172, 103423. https://doi.org/10.1016/j.apgeog.2024.103423
- ➢ Zuopeng, X., Yonglin, L., & **Chengbo, Z**. (2025). Impact of spatial function complementarity on outshopping flows: A spatial interaction model. *Travel Behaviour and Society*, 39, 100965. https://doi.org/10.1016/j.tbs.2024.100965

WORKING PAPERS

Travel behavior and environment

- ➢ **Zhang, C.,** Yang, X, Xiao, Z.*, Uncovering Spatial Patterns of Environmental Influence on the Paces of Active Leisure Travel (Under review in *Cities*)
- ➢ **Zhang, C.,** Xiao, Z.*, Integrating Variable Importance and Spatial Heterogeneity to Reveal the Environmental Effects on Outdoor Jogging (Accepted by *Computational Urban Science*)

Spatial interaction network in instant delivery

- ➢ **Zhang, C.,** Li,Y., Xiao, Z*. Uncover the Dynamic Community Structure of Instant Delivery Network (Manuscript in preparation/ arXiv:2411.10002)
- ➢ **Zhang, C.,** Wang,C., Li,Y., Xiao, Z*. MSI-GCN: Multi Spatial Interaction Graph Convolutional Networks for Instant Delivery Flow Prediction (Manuscript in preparation)

WORK EXPERIENCE

Research Assistant   May. 2024 - Now

Peking University Shenzhen Graduate School

- ➢ Using heterogeneous graph learning to predict instant delivery flows between urban units.

Data analysis intern

CitoryTech Company (citory.tech)   Dec. 2022 - Feb. 2023

- ➢ Analyzed DazhongDianping POI and street view image data to assess travel attractiveness of tourist attractions in Jiangsu Province.

Intern planner   Jul. 2022 - Nov. 2022

Smart City Center, Beijing Tsinghua Tongheng Urban Planning & Design Institute (THUPDI)

➢ Processed mobile signal data to depict and analyze the commuting structure in Beijing.

Digital planning intern   Jul. 2021 - Sept. 2020

 Planning Technology Department of Xiamen Research Center of Urban Planning Digital Technology,

➢ Utilized street view image data and deep learning to evaluate the street quality in Xiamen

CONFERENCE PRESENTATION

➢ Dynamical Community Detection and Spatiotemporal Analysis based on Multilayer Instant Delivery Network. *European Transportation Conference.* Antwerp, Belgium. September 2024.

➢ Examine the nonlinear and interactive effects of built environment on community park visits. *The 5th National Forum on Computational Social Science. Shenzhen, China.* November 2023.

PROJECTS AND AWARDS

The 15-minute city shaped by instant delivery: uncovering dynamic community structure of instant delivery network

➢ Awarded **First Prize** in the 2024 Chengyuan Cup Planning Decision Support Model Design Competition (as **lead contributor**).

➢ Awarded **First Prize** in the 2024 Geoscene GIS Development Competition (as **lead contributor**).

MSI-GCN: Multi Spatial Interaction Graph Convolutional Networks for on-demand delivery demand prediction

➢ Awarded **First Prize** in The 2024 National College Student Statistical Modeling Competition in Guangdong competition division and **Third Prize** in national competition (as **lead contributor**).

Future smart city design: A case in Maqiao-Shanghai district

➢ Awarded the **100 Best prize** in the City Design track at the Digital China Innovation Contest, 2022 (as **lead contributor**).

➢ Awarded the **Nomination Award (Second Prize)** in the WUPENicity International Urban Design Competition, 2022 (as **lead contributor**).

Assessment of street quality and vitality based on street view image and POI data

➢ Awarded the **Inclusion Prize** in the Xiamen Big Data Security and Open Innovation Application Contest, 2021 (as **lead contributor**).

Peitian-Longyan village development planning

➢ Received the **Commendation Award** in the National College Student Rural Planning Scheme Competition for the year 2020 (as one of the contributors).

SKILL

➢ Python (pandas/ matplotlib/ scikit-learn/ pyTorch/ DGL)

➢ LLM (Llama 3/ GPT/ GLM/ LLM Agent)

➢ R/ Stata

➢ QGIS/ArcGIS

➢ Adobe Creative Suite/ Microsoft Office Suite