

Ryan Zhenqi Zhou

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EDUCATION

2021 - Present **Ph.D. (Geographic Information System)**
University at Buffalo - SUNY, USA
Supervisor: Prof. Yingjie Hu

2018 - 2021 **Master of Engineering (Landscape Architecture)**
Nanjing Forestry University, China

2014 - 2018 **Bachelor of Agriculture (Landscape Architecture)**
Zhejiang A&F University, China

RESEARCH & WORK EXPERIENCE

May 2023 – Present **Research Assistant to Prof. Yingjie Hu**
GeoAI Lab, Department of Geography, University at Buffalo - SUNY, USA

August 2023 – August 2023 **Research Fellow**
I-GUIDE Summer School, UCAR, Boulder, Colorado

August 2022 – May 2023 **Teaching Assistant to Prof. Yingjie Hu**
Department of Geography, University at Buffalo - SUNY, USA
GEO 481/506 Geographical Information Systems

May 2022 – August 2022 **Research Assistant to Prof. Yingjie Hu**
Funded by NSF Research Experience for Graduates (REG) Grant

August 2021 – May 2022 **Research Assistant to Prof. Yingjie Hu**
GeoAI Lab, Department of Geography, University at Buffalo - SUNY, USA

August 2020 - October 2020 **Spatial data analyst (Intern)**
MetroDataTech

September 2018 – June 2021 **Research Assistant to Prof. Zhen Xu**
School of Landscape Architecture, Nanjing Forestry University, China

RESEARCH EXPERTISE & SKILLS

- GeoAI, Geospatial Data Science, Spatial Analysis, Statistical Analysis, Spatial-Temporal Data Mining
- Machine Learning, Artificial Intelligence
- Well versed in using Python, NumPy, Pandas, GeoPandas, Scikit-Learn, Keras, TensorFlow, Matplotlib, Seaborn, Bokeh, Request, Json, PyQt, R, GitHub, ArcGIS Pro, MongoDB SQL

PUBLICATIONS

2023 **Zhou R.Z.**, Hu Y., Zou L., Cai H., Bing Z., & Sun K. (2023): Understanding the disparate impacts of the 2021 Texas winter storm and power outages through mobile phone location data and nighttime light images. Under Review.

2023 Sun, K., Hu, Y., Ma, Y., **Zhou, R. Z.**, & Zhu, Y. (2023): Conflating point of interest (POI) data: A systematic review of matching methods. *Computers, Environment and Urban Systems*, 103, 101977. <https://doi.org/10.1016/j.compenvurbsys.2023.101977>

2023 Xu Z., Li M., Chen Y., & **Zhou R.Z.** (2023): Assessing the cycling accessibility of comprehensive parks with online maps: a case study of Nanjing City. *Journal of Nanjing Forestry University Natural Science*, 1-8 (in Chinese).

2022 **Zhou R.Z.**, Hu Y., Tirabassi J.N, Ma Y., & Xu Z. (2022): Deriving neighborhood-level diet and physical activity measurements from anonymized mobile phone location data for enhancing obesity

- estimation. *International Journal of Health Geographics*, 21, 22. <https://doi.org/10.1186/s12942-022-00321-4>
- 2022** Zhang B., Dong Y., Kelobonye K., **Zhou R.Z.**, & Xu Z. (2022): Delineating walking catchment of the existing and proposed public sports facilities with open-source data: a case study of Nanjing. *Applied Spatial Analysis and Policy*, 16, 729-749. <https://doi.org/10.1007/s12061-022-09499-3>
- 2022** Chen Y., Zhang B., Li M., **Zhou R.Z.**, & Xu Z. (2022): Concatenating daily exercise routes with public sports facilities, bicycle lanes, and green spaces: a feasibility analysis in Nanjing, China. *Land*, 11, 2251. <https://doi.org/10.3390/land11122251>
- 2022** Yue M., Hu Y., Moncrieff G.R., Slingsby J.A., Wilson A.M., Maitner B., & **Zhou R.Z.** (2022): Forecasting vegetation dynamics in an open ecosystem by integrating deep learning and environmental variables. *International Journal of Applied Earth Observation and Geoinformation*, 114, 103060. <https://doi.org/10.1016/j.jag.2022.103060>
- 2022** Dong Y., Zhang B., **Zhou R.Z.**, & Xu Z. (2022): Assessing the accessibility of swimming pools in Nanjing by walking and cycling using Baidu Maps. *International Journal of Geo-Information*, 11(10), 515. <https://doi.org/10.3390/ijgi11100515>
- 2021** **Zhou R.Z.**, Xu Z., Liu A., Zhou S., Mu L., & Zhang X. (2021): Mapping the accessibility of medical facilities of Wuhan during the COVID-19 pandemic. *International Journal of Geo-Information*, 10(5), 318. <https://doi.org/10.3390/ijgi10050318>
- 2021** Xu Z., **Zhou R.Z.**, Wang Y., Han L., & Xing J. (2021): Analysis on walking shed in comprehensive parks and urban form from a Park-City perspective. *City Planning Review*, 45(03), 81-90 (in Chinese).
- 2021** Xu Z., Liu A., **Zhou R.Z.**, & Han L. (2021): Analyzing and scenarioizing walking routes and urban context of middle school students with Baidu Map: a case study of Jianye District of Nanjing. *Modern Urban Research*, 2, 33-40+91 (in Chinese).
- 2021** Xu Z., Gao Z., **Zhou R.Z.**, & Zhang J. (2021): Research on campus sitting space: a case study of Nanjing Forestry University. *Modern Urban Research*, 4, 30-35 (in Chinese).
- 2020** **Zhou R.Z.** & Xu Z. (2020): Detecting the pedestrian shed and walking route environment of urban parks with open-source data: a case study in Nanjing, China. *International Journal of Environmental Research and Public Health*, 17(13), 4826. <https://doi.org/10.3390/ijerph17134826>
- 2020** Liu A., Kelobonye K., **Zhou R.Z.**, Xu Q., Xu Z., & Han L. (2020): School commuting mode shift: a scenario analysis for active school commuting using GIS and online map API. *International Journal of Geo-Information*, 9(9), 520. <https://doi.org/10.3390/ijgi9090520>
- 2020** Zhang J., **Zhou R.Z.**, & Xu Z. (2020): Suitability evaluation of university facilities layout based on demand characteristics: taking several universities in Nanjing as examples. *Modern Urban Research*, 4, 43-51 (in Chinese).

CONFERENCE & WORKSHOP PRESENTATIONS

- 2023** Oral presentation (2023): Improving the 3D Representation of Rivers in Digital Elevation Models (DEM), in the *2023 I-GUIDE Summer School*, Aug. 11, 2023, Boulder, Colorado, USA.
- 2023** Oral presentation (2023): Understanding spatial and temporal impacts of the Texas winter storm in 2021 via mobile phone location data and nighttime light images, in the *2023 AAG Annual Meeting*, Mar. 26, 2023, Denver, Colorado, USA.
- 2022** Oral presentation (2022): Deriving neighborhood-level diet and physical activity measurements from anonymized mobile phone location data for enhancing obesity estimation, in the *GEOMED 2022*, Oct. 14, 2022, University of California, Irvine, California, USA.
- 2022** Poster presentation: Human mobility data demonstrates increase in park visitation since start of COVID-19 pandemic in Buffalo, New York, in the *American College of Preventive Medicine (ACPM) 2022 annual meeting*, Jun. 15-18, 2022, Denver, Colorado, USA (Co-Author).
- 2022** Poster presentation: Mapping the accessibility of medical facilities of Wuhan the COVID-19 pandemic, in the *University Consortium for Geographic Information Science (UCGIS) Symposium 2022*, Jun. 7-9, 2022, Syracuse, New York, USA.
- 2022** Oral presentation: The role of place visits related to diet and physical activity from mobile phone location data in enhancing obesity estimation at the neighborhood level, in the *Graduate Student Lightning Talks, Spring 2022 Colloquium Speaker Series, UB Department of Geography*, Feb. 18, 2022, Buffalo, New York, USA.
- 2019** Poster presentation: Measuring the walkability around the urban parks: a case study of Nanjing, in the *16th International Conference on Urban Health*, Nov. 4-8, 2019, Xiamen, Fujian, China.
- 2019** Poster presentation: Mapping the service area and population of urban parks for park city initiative: a case study of Nanjing, in the *16th International Conference on Urban Health*, Nov. 4-8, 2019, Xiamen, Fujian, China.

- 2019** Oral presentation: Old community renovation based on data analysis, in the *9th Summer Workshop DigitalFUTURES YOUNG Forum 2019—Architectural Intelligence held at the School of Architecture and Urban Planning (CAUP), Tongji University*, Jun. 30 to Jul. 6, 2019, Shanghai, China.
- 2019** Poster presentation: Intelligence and Strategy of Urban Deduction—Spark Planning (UrbanGAN), in the *9th Summer Workshop DigitalFUTURES SHANGHAI 2019—Architectural Intelligence held at the School of Architecture and Urban Planning (CAUP), Tongji University*, Jun. 30 to Jul. 6, 2019, Shanghai, China (Co-Author)
- 2019** Oral presentation: Social Loop, loops to connect city and communities, in the *International Digital Urban Design Week held by International Society of City & Regional Planners (ISOCARP) and Southeast University*, Jun. 10-15, 2019, Nanjing, Jiangsu, China.
- 2018** Poster presentation: The urban community agriculture practices in Chinese cities: case studies in Nanjing, in the *15th International Conference on Urban Health*, Nov. 27-30, 2018, Kampala, Uganda, Africa (Co-Author).

AWARDS & GRANTS

- 2023** Travel award, by 2023 I-GUIDE Summer School Program
- 2023** Hugh W. Calkins Applied GIS Award, By Department of Geography at the University at Buffalo - SUNY
- 2022** NSF Research Experience for Graduates (REG) Grant, by Human-Environment and Geographical Sciences (HEGS) program in the National Science Foundation's (NSF), Student PI
- 2021** Outstanding Graduate Award, by Nanjing Forestry University
- 2020** Funded student research project by the Postgraduate Research & Practice Innovation Program of Jiangsu Province (KYCX20_0893), Department of Education, Jiangsu, China, Student PI
- 2020** National Scholarship Award, by Department of Education, China
- 2020** Outstanding Graduate Student Award, by Nanjing Forestry University
- 2020** First-class Scholarship Award, by Nanjing Forestry University
- 2019** Best Project Award, International Digital Urban Design Week held by International Society of City & Regional Planners (ISOCARP) and Southeast University in Nanjing
- 2019** Second-class Scholarship Award, by Nanjing Forestry University
- 2017** Third-class Scholarship Award, by Zhejiang A&F University
- 2016** Second Prize, 4th ZAFU Career Planning Competition, by Zhejiang A&F University
- 2015** Third Prize, 4th ZAFU 'Beautiful Village' Design Competition, by Zhejiang A&F University

SERVICE

Peer Review for Academic Journals

- Computational Urban Science
- Environment and Planning B: Urban Analytics and City Science
- Journal of Map
- Royal Society Open Science

Voluntary Service

- Co-host of GISalon, GISphere (Student-initiated volunteer organizations), Oct. 2021-present, USA.
- Faculty Liaison for PhD, Geography GSA, University at Buffalo - SUNY, Sept. 2022-present, USA.
- Conference Assistant, 2023 AAG Annual Meeting, Mar. 23-27, 2023, USA.