Huihai Wang

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EDUCATION

University of Texas at Austin, Community and Regional Planning   **Sep. 2021-Present**
Degree: Ph.D
Advisor: Professor Junfeng Jiao

Binghamton University, Department of Geography   **Sep. 2018-Jun. 2021**
Degree: Master of Art in Geography
Advisor: Professor Chengbin Deng
Thesis: Development and Application of Sidewalk Anomaly Detection Algorithm Using Mobile Sensors

Wuhan University of Technology, School of Resources and Environmental Engineering   **Sep. 2013-Jun. 2018**
Degree: Bachelor of Science in Geographic Information Science
Overall GPA: 3.5/4.0

RESEARCH INTERESTS

- Urban functional encoding
- Computer Vision in urban sensing
- Robotics in smart city
- GeoAI

RESEARCH EXPERIENCE

Sep. 2023 – Present	**Center for Climate-Smart Transportation** Researcher, student leadership • Deploying Autonomous Robot Delivery System to Replace Truck Delivery and Reduce GHG Emission in Austin, TX.
Jun.2021 – Present	**The University of Texas at Austin** Graduate Research Assistant, Urban Information Lab (UIL Lab) • Deploying Autonomous Robot Delivery System to Replace Truck Delivery and Reduce GHG Emission in Austin, TX. • What's That Robot Doing Here?": Perceptions Of Incidental Encounters With Autonomous Quadruped Robots • A robot platform for sidewalk bird's eye view map creation
Jun.2019 – May. 2021	**Binghamton University** Graduate Research Assistant, Global Environmental Monitoring and Analytics Lab (GEMA Lab)
Jun.2020 – May.2021	**Binghamton University** Graduate Research Assistant, Johnson City Redevelopment Lab

TEACHING EXPERIENCE

Sep.2022 – Dec.2022	**Teaching assistant, Community and Regional Planning, The University of Texas at Austin** *Supervisor: Prof. Junfeng Jiao* • CRP 395C Planning Studio
Jan.2022 – May.2022	**Teaching assistant, Community and Regional Planning, The University of Texas at Austin** *Supervisor: Prof. Patricia Wilson* • CRP 381 Qual/Participatory Methods
Jan.2022 – May.2022	**Teaching assistant, Community and Regional Planning, The University of Texas at Austin** *Supervisor: Prof. Junfeng Jiao* • CRP 386 Urban Geographic Information System

Aug.2019 – **May.2020**	**Teaching assistant, Department of Geography, Binghamton University** *Supervisor: Prof. Chengbin Deng*

- GEOG 532/465 Remote Sensing And GIS
- GEOG 536 Land Use Analysis
- GEOG 505 Raster GIS

Aug.2020 - **Present**	**Teaching assistant, Department of Geography, Binghamton University** *Supervisor: Prof. Mark E. Reisinger*

- GEOG 151 World Regional Geography

PUBLICATIONS

Submitted:

- **Huihai Wang,** Junfeng Jiao*, Margaret Y Liu. (submitted, Transportation research part E, Jan. 2024). Deploying Autonomous Robot Delivery System to Replace Truck Delivery and Reduce GHG Emission in Austin, TX.

- **Huihai Wang,** Junfeng Jiao*. (Under review, Cities). A Robot Platform For High Resolution Bird's Eye View Sidewalk Map Creation.

Published:

- Jiao, J., & **Wang, H.** (2023). Forecasting Traffic Speed during Daytime from Google Street View Images using Deep Learning. *Transportation Research Record*, 03611981231169531.

- Jiao, J., Choi, S. J., **Wang, H.**, & Farahi, A. (2023). Evaluating Air Quality Status in Chicago: Application of Street View Imagery and Urban Climate Sensors. *Environmental Modeling & Assessment*, 1-18.

- Hauser, E., Chan, Y. C., Chonkar, P., Hemkumar, G., **Wang, H.**, Dua, D., ... & Stone, P. (2023). " What's That Robot Doing Here?": Perceptions Of Incidental Encounters With Autonomous Quadruped Robots.

- Jiao, J., & **Wang, H.** (2022). Traffic behavior recognition from traffic videos under occlusion condition: a Kalman filter approach. *Transportation research record*, *2676*(7), 55-65.

- **Wang, H.** (2021). *Development and Application of Sidewalk Anomaly Detection Algorithm Using Mobile Sensors* (Doctoral dissertation, State University of New York at Binghamton).

- Deng, C., Dong, X., **Wang, H.**, Lin, W., Wen, H., Frazier, J., ... & Holmes, L. (2020). A Data-Driven Framework for Walkability Measurement with Open Data: A Case Study of Triple Cities, New York. ISPRS International Journal of Geo-Information, 9(1), 36.

Conferences

- A Robot Platform for High-Resolution Bird's Eye View Sidewalk Map Creation. Paper presented at **the Association of Collegiate Schools of Planning (ACSP) Annual Meeting**, October 18-21, 2023. Chicago, USA.

- "Forecasting Traffic Speed during Daytime from Google Street View Images using Deep Learning", Poster Session, AI Applications in Transportation Planning, **the 102nd Annual Meeting of Transportation Research Board**, Washington D.C., USA, Jan 2023.

- "Pedestrian-Cyclist Interaction and Safety Analysis based on Drone Video", Presentation, Spatial Social Science Topics in Safety, Crime, and Justice, **the American Association of Geographers (AAG) annual meeting 2023**, Virtually, March. 2023.

- "Look to my Lead: How Does a Leash Affect Perceptions of Quadruped Robot?", Workshops & Tutorials, Social Robot Navigation: Advances and Evaluation, **the 39th IEEE International Conference on Robotics and Automation (ICRA)**, Philadelphia, USA, May 2022.

- "Traffic Behavior Recognition from Traffic Videos under Occlusion Condition: A Kalman Filter Approach", Poster Session, Information Systems and Technology, **the 101st Annual Meeting of Transportation Research Board**, Washington D.C., USA, Jan 2022.

SCHOLARSHIPS & AWARDS

2019	FIRST PLACE-GRADUATE, Fifth Annual GIS Day Student Poster Competition, Binghamton University
2019	People's Choice Award, Fifth Annual GIS Day, Student Poster Competition, Binghamton University
2015	Merit Student, Wuhan University of Technology
2015	Second Prize of School Scholarship, Wuhan University of Technology
2014	Bozhulixue Scholarship (First Class), Wuhan University of Technology

SKILLS

- Programming: Python, C++, MATLAB, R
- Robot Operating System (ROS)
- Deep Learning Frameworks: Pytorch, Tensorflow
- Languages: English, Mandarin