

# HAOYU YUE

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Urban Infrastructure Lab, Gould Hall, 3950 University Way NE, Seattle, Washington, 98195

## RESEARCH INTERESTS

Climate, Clean Energy and Infrastructure Planning, Planning for Artificial Intelligence

## EDUCATION

- 2020 - **University of Washington** – Seattle, WA  
Interdisciplinary Ph.D. in Urban Design and Planning  
Committee: Jan Whittington, Qing Shen  
Master of Science in Statistics, *Department of Statistics*  
Master of Urban Planning in Urban Informatics  
Advisors: Jan Whittington, Arthur Acolin (Real Estate)  
Certificate in Public Policy and Management, *Evan School of Public Policy and Governance*  
Certificate in Clean Energy Science, Engineering, and Society, *Clean Energy Institute*
- 2020 **Central South University** – Changsha, China  
Bachelor of Engineering in Urban and Rural Planning

## EXPERIENCE

- 2024 - **Microsoft Research** – Redmond, WA  
AI & Society Research Fellow
- 2024 - **Climate Solutions International** – Seattle, WA  
Affiliated Researcher
- 2021 - **University of Washington** – Seattle, WA  
Research Assistant, Urban Infrastructure Lab  
Teaching Assistant, Department of Urban Design and Planning
- 2020 **Shenzhen Urban Planning & Land Resource Research Center** – Shenzhen, China  
Intern, Land Consolidation Research Institute

## RESEARCH PROJECTS

- 2025 Planning for Solar investment at the Convergence of Resilience and Equity (SCORE)  
*U.S. Department of Energy | PI: Nick Grue (NREL); Co-PI: Jan Whittington*
- 2024 Washington State Community Solar Economic Impact Assessment  
*Coalition for Community Solar Access | PI: Jan Whittington*  
Web-based Application for Climate-smart Capital Investment  
*CoMotion, Climate Solutions International | PI: Sofia Dermisi*
- Mobility Hub Electrification Blueprint  
*Mobility Innovation Center with King County Metro, Sound Transit, and Seattle City Light | PI: Jan Whittington; Co-PIs: Chris Lee, Rachel Berney*
- 2023 Solar and Transportation Electrification for the University of Washington  
*UW Transportation Services | PI: Jan Whittington*

- Climate-smart Capital Investment Plan for Montgomery County, MD  
*Montgomery County | PI: Jan Whittington; Co-PI: Adrienne Greve (Cal Poly)*
- 2022 Ultra High Speed Ground Transport: An Evaluation  
*Challenge Seattle, Mobility Innovation Center | PI: Jan Whittington; Co-PI: Qing Shen*
- 2021 Social Vulnerability & Resilience during Covid-19 Pandemic  
*Urban AI + Resilience Lab, UTSA | Collaborator: Wei Zhai*

### **PUBLICATIONS**

- 2025 Ning, S., Yue, H., Whittington, J. (2025). *Economic Impact Analysis of Community Solar Programs for the State of Washington*. Seattle, WA: University of Washington.
- 2024 Whittington, J., Berney, R., Lee, H.W., Treece, B., Ning, S., Chen, C., Muiruri, K., Yue, H., & Machala, T. (2024). *Electrified Mobility Hubs: A Blueprint for the Future of Transit Infrastructure*. Seattle, WA: Mobility Innovation Center, University of Washington.
- 2023 Whittington, J., Shen, Q., Sun, F., Ning, S., Yue, H., Chen, C., & McMichael, R. (2023). *Keeping it on the Tracks: High-speed Rail Success and Lessons Learned*. Seattle, WA: Mobility Innovation Center, University of Washington.
- 2022 Yue, H. (2022). Does Climate Investment Funding Intensify Green Gentrification in San Francisco-Oakland-Berkeley Bay Area? University of Washington.
- Zhai, W., Yue, H., & Deng, Y. (2022). Examining the Association Between Green Space and Viral Transmission of COVID-19 during the Early Outbreak. *Applied Geography*, 147, 102768, 9–14.
- Zhai, W., & Yue, H.. (2022). Economic Resilience during COVID-19: An Insight from Permanent Business Closures. *Environment and Planning A: Economy and Space*, 54(2), 219-221.

### **HONORS AND SCHOLARSHIPS**

- 2025 Clean Energy Graduate Fellowship (Clean Energy Institute - \$36,000)  
Outstanding Ph.D. Student Award (University of Washington)  
Graduate Student Conference Award (Graduate School, University of Washington – \$500)
- 2024 Microsoft Research AI & Society Fellowship (Microsoft Research – \$45,000)  
Urban Design and Planning Special Service Recognition Award (Department of Urban Design and Planning, University of Washington)
- 2023 Spatial Social Network Workshop Graduate Travel Support (Georgia Tech – \$500)
- 2022 Hall-Ammerer-Washington-Research-Foundation Ph.D. Fellowship in Interdisciplinary Studies (Graduate School, University of Washington – \$50,000)
- 2021 Urban Design and Planning Student Scholarship (University of Washington – \$1,500)  
Smart City Hackathon – Second Prize (University of Texas, Austin – \$500)
- 2018 Esri Chinese College GeoDesign Prize (Esri China, Chinese Society for Geodesy, Photogrammetry and Cartography)
- 2016 - 19 Annual Undergraduate Student Scholarship × 4 (Central South University)

### **TEACHING AND MENTORSHIP**

#### **University of Washington**

- 2025 URBAN 576/CET 586: User and Design Considerations for Pedestrian and Rolling Mobility (spring, 3-credit graduate elective, teaching assistant for Rachel Berney)
- 2024 URBAN 598: Doctoral Colloquium (spring and autumn, co-organizer, with Siman Ning)

2023 - 25 URBAN 498/598/ENGR 497: Vertically Integrated Project - UW Solar Student Group (autumn, winter and spring quarter, co-advisor, with Jan Whittington)

### **Supervision of Graduate Capstone Projects**

2024 Cecilia Hung, Yongzhe Jiang, Matilda Huang, Yifan Wang, Master Student in Technology Innovation, University of Washington, *SolarEase: AI-powered Community Energy Platform*, co-adviser with Peeyush Kumar. Sponsored by Microsoft Research.

Mengyin He, Kelsey Mara, Ni Zhang, MBA Student, Foster School of Business, University of Washington, *Enabling Access to Finance for Tribal Ownership of Renewable Energy*, co-adviser with Phillip Bruner and Christian Phillips. Sponsored by Climate Risk Lab.

2023 Chris Ge, Namratha Shivaraju, Yvonne Yang, Master Student in Technology Innovation, University of Washington, *Investing in Sustainability: Solar Farms for Sustainable Communities*, co-adviser with Peeyush Kumar and Jan Whittington. Sponsored by Microsoft Research.

### **PRESENTATIONS AND POSTERS**

2025 Yue, Haoyu, Jan Whittington, Siman Ning. "Community or Community-Owned Solar? An Empirical Study of Organizational Structure on Decision-making." *Annual Conference of the Association of Collegiate Schools of Planning*, Minneapolis, MN, October 23-25, 2025.

Whittington, Jan, Susan Clark, Haoyu Yue, Siman Ning. "Understanding Community Preferences for Improved Energy Resilience." *Annual Conference of the Association of Collegiate Schools of Planning*, Minneapolis, MN, October 23-25, 2025.

Clark, Susan, Jan Whittington, Haoyu Yue, Siman Ning, Leah Bargnesi, Hillary Bialecki. "The Benefits of Community-Engaged Electric Utility Planning for Resilience", *Annual Natural Hazards Research and Applications Workshop*, Broomfield, CO, July 16-17, 2025.

Yue, Haoyu, Jan Whittington, Peeyush Kumar. "Community Ownership of Renewable Energy in the Age of Artificial Intelligence." *Microsoft AI & Society Program Showcase*, Online, June 30, 2025.

Yue, Haoyu. "AI-powered Community Microgrids as Social Infrastructure." *CS4Environment Symposium: AI and the Future of Hazard-Resilient Energy Systems*, Seattle, WA, May 30, 2025. Poster.

Yue, Haoyu. "A Planning View of Artificial Intelligence Futures: AI as Infrastructure" *Urban Design & Planning Interdisciplinary Ph.D. Research Seminar*, Seattle, WA, May 12, 2025.

Yue, Haoyu, Jan Whittington. "Artificial Intelligence as Infrastructure" *Microsoft AI & Society Research Talk Series*, Online, May 7, 2025.

Yue, Haoyu, Jan Whittington, Siman Ning, Christian Phillips. "Actions to Investment: An Exploration of Complex Nexus Between Climate Action Plans and Capital Investment Plans" *International Conference on Urban Affairs*, Vancouver, Canada, April 15-19, 2025.

2024 Yue, Haoyu, Wei Zhai, Jan Whittington. "Plans to Action: Do Climate Action Plans Matter for Climate Investments?" *Annual Conference of the Association of Collegiate Schools of Planning*, Seattle, WA, November 7-9, 2024.

Yue, Haoyu. "AI-powered Microgrids and Infrastructure for Community Resilience and Equity" *Microsoft Research AI & Society Fellows Workshop*, Boston, MA, October 16-17, 2024.

2022 Yue, Haoyu, Jan Whittington, Acolin Author. "Does Climate Investment Funding Intensify Green Gentrification in Bay Area?" *Annual Conference of the Association of Collegiate Schools of Planning*, Toronto, Canada, November 3-6, 2022.

2021 Bae, Christine, Boyang Sa, Eric Guida, Haoyu Yue. "It Takes a Village to Make Urban Villages Work: Effects of Zoning and Land Use Policies on Property Value and Densification in Seattle." *Annual Conference of the Association of Collegiate Schools of Planning*, Online, October 7-23, 2021

## **SERVICES**

- 2025 – Pacific Northwest Climate Ambassador – Washington State Climate Office  
2024 – 25 Program Assistant – Urban@UW Initiative, University of Washington  
2024 Organizer – Ph.D. Symposium on Planning for a Changing Climate: Key Considerations  
Student Volunteer – Annual Conference of the Association of Collegiate Schools of Planning  
2023 – 24 Student Representative – Steering Committee for the Interdisciplinary Ph.D. Program in Urban Design and Planning, University of Washington  
2022 – 24 Referee – Humanities and Social Sciences Communications; Air Quality, Atmosphere & Health

## **MEMBERSHIPS**

- 2022 – Student member, Association of Collegiate Schools of Planning  
Student member, American Association of Geographers  
2020 – Student member, International Association for China Planning  
Student member, American Planning Association

## **COURSEWORK**

### **Computer Science and Engineering / CSE**

414 Database System, 512 Data Visualization, 517 Natural Language Processing (LLMs), 546 Machine Learning, 574 Explainable AI, 583 Software Development

### **Statistics / STAT**

502 Experiments Design, 504 Applied Regression, 512/513 Statistical Inference, 534 Statistical Computing, 554 Spatial Statistics, 560 Hierarchical Modeling, 567 Statistical Analysis of Social Networks, 570/571 Advanced Regression Methods

### **Urban Design and Planning / URBAN**

566 Infrastructure Planning and Finance, 561 Urban Economics and Public Policy, 591 Research Design in Urban Science, 592, Planning Theory, 598 Urban Climate Solution

### **Others**

ATM S 587 Fundamentals of Climate Change, CEWA 567 Python Geospatial Analysis, CET 565 Climate Change and Energy, EE 553 Power System Economics, GEOG 521 Critical GIS, PPM 504 Institutions, PPM 506 Microeconomics, PPM 508 Public Policy Processes

## **TECHNICAL SKILLS**

### **Programming languages**

Python, R, SQL, HTML/JavaScript/CSS, D3.js

### **Software**

LATEX, Git, ArcGIS, QGIS, Microsoft Office Suite, SketchUp, Adobe Creative Cloud Suite

### **Languages**

English (fluent), Chinese (native)