

Hanyong Xu

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Cambridge, MA 02139

RESEARCH INTEREST

- Responsible AI in urban science systems
- Platform economy, urban forms, and human behavior

EDUCATION

- 2023 - present **Ph.D., Urban Science** Cambridge, MA
Massachusetts Institute of Technology
- Advisor: Jinhua Zhao
 - *Selected Coursework: Optimization Methods; Transportation Foundation & Methods; Demand Modeling*
- 2019 - 2020 **Master, Urban Spatial Analysis** Philadelphia, PA
University of Pennsylvania
- Advisor: Ken Steif
 - *Selected Coursework: Spatial Statistics and Data Analysis; Data Wrangling and Visualization*
- 2015 - 2019 **Honors Bachelor of Arts** Toronto, ON
University of Toronto
- with High Distinction
 - Double Major in Economics and Architectural Design

WORKING PAPERS

- [1] **Xu, H.**, Zhao, J. “Longitudinal Evaluations of the Coverage and Pricing Differences between Transportation Network Companies and Traditional Taxis: A Case Study of New York City.”
- [2] He, X., **Xu, H.**, Shen C., Zhuang D., Zheng Y., & Zhao J. “Modeling Latent Demand and Reducing Prediction Disparities of Ride-hailing: A Fair Quantile Regression Method.”
- [3] Guo X., **Xu H.**, Zheng Y., Zhuang D., & Zhao J. “[Disparity-Reducing Vehicle Rebalancing in the Ride-hailing System.](#)”

CONFERENCES & WORKSHOPS

- Jan 2026 **Xu, H.**, Zhao, J. “Longitudinal Evaluations of the Coverage and Pricing Differences between Transportation Network Companies and Traditional Taxis: A Case Study of New York City.”
105th Transportation Research Board Annual Meeting (TRB, poster presentation, scheduled)

- He, X., **Xu, H.**, Shen C., Zhuang D., Zheng Y., & Zhao J. “Modeling Latent Demand and Reducing Prediction Disparities of Ride-hailing: A Fair Quantile Regression Method.” *105th Transportation Research Board Annual Meeting (TRB, lectern presentation, scheduled)*
- July 2025 Gao J., **Xu H.**, Dao L. “[Simulating Multi-Stakeholder Decision-Making with Generative Agents in Urban Planning](#)” *32nd International Conference on Transdisciplinary Engineering (TE2025, oral presentation)*
- Jan./Apr. 2025 Zhuang D., **Xu H.**, Guo X., Zheng Y., Wang S., & Zhao J. “[Mitigating Spatial Disparity in Urban Prediction Using Residual-Aware Spatiotemporal Graph Neural Networks: A Chicago Case Study.](#)” *104th Transportation Research Board Annual Meeting (TRB, poster presentation), The International Workshop on Spatio-Temporal Data Mining from the Web (WebsT’25 @ WWW’25, workshop, Best Paper Award) [[proceeding](#)]*
- Oct. 2024 **Xu H.** “Navigating Algorithmic Unfairness in Ride-Hailing: Examining Disparate Impacts of Transportation Network Company Algorithms in New York City.” *2024 INFORMS Annual Meeting (invited talk)*
- Sept. 2024 Mo B., **Xu H.**, Cho J. H., Zhuang D., Ma R., Guo X., & Zhao J. “[Large Language Model for Travel Behavior Prediction.](#)” [[extended abstract](#)] *Conference in Emerging Technologies in Transportation Systems (TRC-30, poster presentation)*

RESEARCH EXPERIENCE

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|----------------|---|---------------|
| 2023 - present | Researcher, JTL Urban Mobility Lab, MIT | Cambridge, MA |
| 2022 | Research Assistant, FUSE Lab, Hong Kong University | Remote |

PROFESSIONAL EXPERIENCE

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| 2021 - 2023 | Data Analyst, Internal Risk Control and Compliance, Meituan | Beijing, China |
| 2020 - 2021 | Data and GIS Analyst, CityDNA Technology Co. | Beijing, China |
| 2020 | Data Science Intern, AreaProbe | Remote |

TEACHING EXPERIENCE

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|-------------|---|
| 2024 - 2025 | Teaching Assistant, Introduction to Spatial Analysis and GIS, MIT |
| 2024 - 2025 | Teaching Assistant, Workshop on GIS, MIT |

HONORS & GRANT

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| 2024 | Racially Just Research Initiative Microgrant, DUSP MIT |
| 2024 | Design and Technology Fellow , FASPE |
| 2023 | Presidential Graduate Fellowship , MIT |
| 2020 | Descartes Award (top 2 in the cohort) , University of Pennsylvania |
| 2019 | 1st Place , Wharton Customer Analytics + Electronic Arts Datathon |
| 2019 | 2nd Prize , Computational Design and Robotic Fabrication International Competition, DigitalFUTURES, Tongji University |
| 2019 | UofT Women in House , University of Toronto |

INSTITUTE SERVICE

2024 - present **Student Representative**, MIT DUSP PhD Committee

SKILLS

Data Science & Machine Learning: Python + PyTorch, Julia + Gurobi, SQL, R, Excel, Google Cloud Computing

Front End & Visualization: JavaScript + html + css, Vue, Leaflet, Mapbox, Kepler

Geo-Spatial Analysis: ArcGIS, ArcPy, QGIS, Google Earth Engine, GeoDa

Product Design: Figma, Adobe Photoshop, Illustrator, InDesign

Last updated: Nov. 19th, 2025