

UIJEONG HWANG

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EDUCATION

Ph.D. in City and Regional Planning <i>Georgia Institute of Technology, GA, USA</i>	Aug. 2019 - present
Master of Science in Urban Analytics <i>Georgia Institute of Technology, GA, USA</i>	Aug. 2021 - Aug. 2023
Master of Science in Urban Planning and Design <i>University of Seoul, Seoul, South Korea</i>	Sep. 2015 - Aug. 2017
Bachelor of Science in Urban Planning and Design, cum laude <i>University of Seoul, Seoul, South Korea</i>	Mar. 2010 - Feb. 2016
Exchange Program: Sustainable Area Development and Integrated Water Management <i>Saxion University of Applied Science, The Netherlands</i>	Sep. 2014 - Feb. 2015

RESEARCH INTERESTS

- Smart Growth & Sustainability; Travel Behavior & the Built Environment; Active Mobility; Transit Equity
- Geospatial Analytics; Visualization & Mapping; GIS
- Data Science; Urban Informatics; Deep learning; Computer Vision
- Network Analysis; Urban Modeling and Simulation

PROFESSIONAL SKILLS

- *Programming Languages:* Python, R, C, SQL, JavaScript, HTML, and CSS
- *Frameworks & libraries:*
 - *Web development:* React.js, Node.js, and jQuery
 - *Visualization & mapping:* Mapbox.js, D3.js, kepler.gl, and deck.gl
 - *Machine Learning:* PyTorch, Tensorflow & Keras, OpenCV, and MNCV
 - *High performance computing:* MVAPICH2
- *Software:* ArcGIS, QGIS, Gephi, Adobe Photoshop & Illustrator, SketchUp, and AutoCAD

RESEARCH & PROFESSIONAL EXPERIENCE

Senior Planner <i>Transportation Access & Mobility, Atlanta Regional Commission, Atlanta, GA</i> <ul style="list-style-type: none">• Implementation of region-wide agent-based travel demand modeling.• Deep learning-based automation of transportation asset management process.	Aug. 2023 - present
Research Assistant <i>Center for Spatial Planning Analytics and Visualization (CSPAV), Georgia Tech, Atlanta, GA</i> <ul style="list-style-type: none">• Developed Computer Vision models for detecting street infrastructure and predicting visual safety scores of streets.• Analyzed the impact of bike lanes on transportation mode choice and biking safety.• Developed and demonstrated an algorithmic framework for generating a complete street network in Atlanta.• Assessed transit accessibility/equity/equality of the On Demand Multimodal Transit System.	Aug. 2019 - present
Junior Researcher <i>Transportation System Research Center, Seoul Institute, Seoul, South Korea</i> <ul style="list-style-type: none">• Analyzed changes in the characteristics of household travel behavior in Seoul for 20 years.	Jul. 2018 - Jul. 2019

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Junior Researcher

Jan. 2018 - Jun. 2018

Regional Economy Research Center, Korea Research Institute of Human Settlements, Sejong, South Korea

- Research on region-wide comprehensive development plans

Research Assistant

Sep. 2015 - Aug. 2017

Economic Development & Spatial Planning Lab., University of Seoul, South Korea

- Analyzed the inter-relationship between urban decline and urban sprawl and its spatial diffusion.
- Developed follow-up measures for urban infrastructure that was planned decades ago yet unrealized in Seoul.
- Studied optimum standard for floor-area of commercial facilities in apartment housing complex.

Intern

Jun. 2015 - Aug. 2015

Department of City Planning, the city of Seoul, South Korea

- Conducted a case study on zoning code reform in the U.S. cities.
- Organized 80 years history of land use changes in the city of Seoul and digitized using ArcGIS.

Undergraduate Research Assistant

Jun. 2013 - Mar. 2014

Urban Design & History Lab., University of Seoul, South Korea

- Conducted field investigation on types of urban frontage in Downtown Seoul and digitized using ArcGIS.

JOURNAL ARTICLES

Hwang, U., Lieu, S., Dalmeijer, K., Guan, H., Guhathakurta, S., & Van Hentenryck, P. (under review). Measuring Transit Equity of an On-demand Multimodal Transit System.

Hwang, U., Kim, I., Guhathakurta, S., & Van Hentenryck, P. (under review). Comparing Different Methods for Connecting Bike Lanes to Generate a Complete Bike Network and Identify Potential Complete Streets in Atlanta

Koo, B., **Hwang, U.**, & Guhathakurta, S. 2023. "Streetscapes as Part of Servicescapes: Can walkable streetscapes make local businesses more attractive?" *Computers, Environment and Urban Systems*, 106, 102030

Hwang, U., & Guhathakurta, S. 2023. "Exploring the Impact of Bike Lanes on Transportation Mode Choice: A simulation-based, route-level impact analysis." *Sustainable Cities and Society*, 104318.

Hwang, U., & Woo, M. 2020. "Analysis of Interactions between Urban Decline and Urban Sprawl in City-regions of South Korea." *Sustainability*, 12(4), 1656.

Hwang, U., & Woo, M. 2017. "Impact Analyses of City-County Consolidation on Urban Growth in South Korea." *Journal of Korea Planning Association* 52(1): 39-62. (In Korean)

Hwang, U., & Woo, M. 2016. "Analysis of Urban Sprawl Types and Their Characteristics through Measuring Urban Sprawl in South Korea." *Journal of Korea Planning Association* 51(5): 21-42. (In Korean)

PRESENTATIONS

"Measuring Transit Equity in On-Demand Multimodal Transit Service".

Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Toronto, Canada, on Nov. 5, 2022.

"Exploring the Impact of Bike Infrastructure on Mode Choice: Simulation-based, route-level impact analysis".

The 61st Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Online, on Oct. 22, 2021.

"From Complete Streets to Complete Street Networks: Determining optimum paths for connecting bike lanes to generate complete street network in Atlanta".

The 60th Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Online, on Nov. 7, 2020.

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"Analysis of Interactions between Urban Decline and Urban Sprawl in City-regions of South Korea".

The Spring Congress of Korea Planning Association (KPA), Yonsei University, Seoul, South Korea on Apr. 29, 2017.

"The Impacts of City-County Consolidation on Urban Growth in South Korea".

The 56th Annual Conference of the Association of Collegiate Schools of Planning (ACSP), Portland, Oregon on Nov. 4, 2016.

"Measuring Urban Sprawl and Analyzing Its Types and Characteristics in South Korea".

The Annual Meeting of the Association of American Geographers (AAG), San Francisco, California on Apr. 2, 2016.

HONORS & AWARDS

- **Honorable Mention in 50th Annual CaGIS Map Design Competition (Digital/Interactive Map)**. The Cartography and Geographic Information Society, Mar. 24, 2023
 - Uijeong Hwang, Seung Jae Lieu, and Subhrajit Guhathakurta. *Atlanta's Transit Equity: Current benchmarks and future possibilities* (https://uihwang.github.io/transit_equity)
- **1st Place in GIS Hackathon**. School of City and Regional Planning, Georgia Tech, Nov. 9, 2019
- **KOFST Award for Excellent Paper in Science & Technology**. The Korean Federation of Science and Technology Societies (KOFST), Jun. 27, 2018
 - Uijeong Hwang and Myungje Woo. 2017. "Impact Analyses of City-County Consolidation on Urban Growth in South Korea." *Journal of the Korean Planners Association* 52(1): 39-62.
- **2017 Paper of the Year**. Korea Planning Association (KPA), Feb. 23, 2018
 - Uijeong Hwang and Myungje Woo. 2017. "Impact Analyses of City-County Consolidation on Urban Growth in South Korea." *Journal of the Korean Planners Association* 52(1): 39-62.
- **Award for Excellent Research Presentation**. Korea Planning Association (KPA), Apr. 29, 2017
 - Uijeong Hwang and Myungje Woo. "Analysis of Interactions between Urban Decline and Urban Sprawl in City-regions of South Korea." Presented at *the Spring Congress of Korea Planning Association (KPA)*, Yonsei University, Seoul, South Korea on Apr. 29, 2017.
- **Award for Outstanding Paper**. University of Seoul, Feb. 15, 2017
 - Uijeong Hwang and Myungje Woo. 2016. "Analysis of Urban Sprawl Types and Their Characteristics through Measuring Urban Sprawl in South Korea." *Journal of the Korean Planners Association* 51(5): 21-42.
- **Award for Excellent Research Presentation**. Korea Planning Association (KPA), Apr. 30, 2016
 - Uijeong Hwang and Myungje Woo. "Analysis of Urban Sprawl Types and Their Characteristics through Measuring Urban Sprawl in South Korea." Presented at *the Spring Congress of Korea Planning Association (KPA)*, University of Seoul, Seoul, South Korea on Apr. 30, 2016.
- **Scholarship for Combined BS/MS Degree Program**. University of Seoul, Spring 2016; Fall 2016; Spring 2017
- **Award Certificate for Graduation with Honors**. Korea Planning Association (KPA), Feb. 2016
- **Best Graduation Work**. Korean Professional Urban Planner's Association, Jun. 2015
- **Seoul Mayor's Scholarship for Excellent Academic Achievement**, the city of Seoul, Fall 2015
- **DB Group Scholarship**, DB Group, Spring 2014; Fall 2014; Spring 2015
- **Scholarship for Student Ambassador**, University of Seoul, Spring 2014
- **Scholarship for Excellent Academic Achievement**, University of Seoul, Fall 2010; Fall 2013

CERTIFICATES

- **Advanced Data Analytics Semi-Professional (state certified)**, Korea Data Agency, South Korea, Sep. 2017.
- **Urban Planning Engineer (state certified)**, Human Resources Development Service of Korea, South Korea, Aug. 2017.