

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 - May 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 MMCV
 - *High performance computing:* MVAPICH2
- *Software:* ArcGIS, QGIS, Gephi, Adobe Photoshop & Illustrator, SketchUp, and AutoCAD

RESEARCH & PROFESSIONAL EXPERIENCE

Research Assistant <i>Center for Spatial Planning Analytics and Visualization (CSPAV), Georgia Tech, Atlanta, GA</i>	Aug. 2019 - present
<ul style="list-style-type: none">• developing a methodology for detecting street infrastructure (e.g., bike lanes and on-street parking) using street view imagery and Deep Learning.• analyzed the impact of bike lanes on transportation mode choice.• 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.	
Junior Researcher <i>Transportation System Research Center, Seoul Institute, Seoul, South Korea</i>	Jul. 2018 - Jul. 2019
<ul style="list-style-type: none">• analyzed changes in the characteristics of household travel behavior in Seoul for 20 years.	
Junior Researcher <i>Regional Economy Research Center, Korea Research Institute of Human Settlements, Sejong, South Korea</i>	Jan. 2018 - Jun. 2018
<ul style="list-style-type: none">• Research on region-wide comprehensive development plans	

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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 of Seoul and digitized using ArcGIS.

JOURNAL ARTICLES

Bon Woo Koo, **Uijeong Hwang** and Subhrajit Guhathakurta. (Under Review – Second Revision). "Streetscapes as Part of Servicescapes: Can walkable streetscapes make local businesses more attractive?" *Computers, Environment and Urban Systems*.

Uijeong Hwang and Subhrajit Guhathakurta. 2022. "Exploring the Impact of Bike Lanes on Transportation Mode Choice: A simulation-based, route-level impact analysis." *Sustainable Cities and Society*, 104318.

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

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

Uijeong Hwang and Myungje Woo. 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)

CONFERENCE PAPERS

Uijeong Hwang, Bon Woo Koo, and Subhrajit Guhathakurta. 2023. "A Geometric Approach for Detecting Unregulated On-Street Parking based on a Sequence of Street View Images." *The 18th International Conference on Computational Urban Planning and Urban Management*, Montreal, Canada.

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.

"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.

UIJEONG HWANG

"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.

OTHER EXPERIENCE

Student Ambassador

University of Seoul, Seoul, South Korea

Feb. 2014-Jul. 2014

Military Service -- Social Service Agent

Korea Centers for Disease Control and Prevention (KCDC)

Jan. 2011-Jan. 2013