

# Yunsik Kim

## Curriculum Vitae

### The University of North Carolina at Charlotte

Department of Earth, Environmental and Geographical Sciences

9201 University City Blvd

Charlotte, NC 28223, U.S.A.

Email: [ykim89@charlotte.edu](mailto:ykim89@charlotte.edu)

Homepage: <https://ykimgeo.github.io/>

Google Scholar: [Link](#)

LinkedIn: [Link](#)

### RESEARCH INTERESTS

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Geographic information sciences (GIScience), Spatial accessibility modeling,  
Spatial statistics, Geospatial artificial intelligence (GeoAI), Urban analytics

### EDUCATION

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#### Ph.D. Student in Geography

Aug 2024–Present

Department of Earth, Environmental and Geographical Sciences, The University of North Carolina at Charlotte, Charlotte, NC, USA.

Advisor: Dr. Youngseob Eum

Cumulative GPA: 4.0/4.0

#### Master of Geography

Sep 2021–Aug 2023

Department of Geography, Dongguk University, Seoul, South Korea

Advisor: Dr. Byungyun Yang

Thesis: *Analysis of Changes in Urban Activity Patterns After the COVID-19 Pandemic Using GeoAI and SNS data*

Cumulative GPA: 4.5/4.5

#### Bachelor of Arts in Geography Education

Mar 2016–Aug 2021

Department of Geography Education, Dongguk University, Seoul, South Korea

Cumulative GPA: 4.0/4.5 (Magna Cum Laude)

### RESEARCH EXPERIENCE

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#### Research Assistant

Aug 2024–Present

*Department of Earth, Environmental and Geographical Sciences, University of North Carolina at Charlotte*

#### Research Assistant

May 2025–Aug 2025

*Center for Applied Geographic Information Science, University of North Carolina at Charlotte*

#### Visiting Scholar

Aug 2022–Mar 2023

*Department of Natural Sciences, University of West Georgia*

#### Graduate Research Assistant

Sep 2021–Aug 2023

*Department of Geography, Dongguk University*

#### Researcher (Part-time)

Jan 2020–Dec 2021

*National Institute of Ecology, Ministry of Environment of Korean Government*

**Undergraduate Research Assistant**

Sep 2019–Aug 2021

*Department of Geography Education, Dongguk University*

**TEACHING EXPERIENCE**

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**Co-Instructor (Part-time), GEO2045 (GIS)**

Fall 2023

*Department of Geography Education, Dongguk University*

**Lecturer (Part-time), Social Studies**

Aug 2023

*Howon Middle School, Uijeongbu, South Korea*

**Teaching Assistant, GEO4063 (GIS and Spatial Analysis)**

Spring 2022

*Department of Geography Education, Dongguk University*

**Student Teacher, Geography**

May 2021

*Osong High School, Cheongju, South Korea*

**Teaching Assistant, GEO2046 (Cartography)**

Spring 2021

*Department of Geography Education, Dongguk University*

**OTHER PROFESSIONAL EXPERIENCE**

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**Administrative Assistant**

Mar 2024–Jun 2024

*Department of Environmental & Biological Chemistry, Chungbuk National University,  
Cheongju, South Korea*

**PUBLICATIONS**

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Underline: Corresponding Author

**Peer-Reviewed Articles**

- [6] **Kim, Y.** & Yang, B. (Under review). GeoAI-driven analysis of urban activity shifts using geotagged social media data across the COVID-19 pandemic. *Environment and Planning B: Urban Analytics and City Science*.
- [5] **Kim, Y.** & Eum, Y. (2025). Improving telehealth accessibility assessment with a demographics-weighted two-stop virtual catchment area (DW-2SVCA) method. *Computational Urban Science*, 5, Article 59. <https://doi.org/10.1007/s43762-025-00218-5>
- [4] Yang, B., **Kim, Y.**, Kim, T. H. & Park, J. K. (2024). Investigating quantitatively the root causes of non-implementation of public surveying performance review and deriving institutional improvement measures. *Journal of the Korean Society of Surveying, Geodesy, Photogrammetry and Cartography*, 42(3), 213–224 (in Korean with English abstract). <https://doi.org/10.7848/ksgpc.2024.42.3.213>
- [3] **Kim, Y.** (2023). Prediction of traffic congestion using a time-series model and spatiotemporal big data: A case study of the Atlanta Downtown Connector. *The Geographical Bulletin*, 64(2), 93–102. <https://digitalcommons.kennesaw.edu/thegeographicalbulletin/vol64/iss2/7>
- [2] **Kim, Y.** & Yang, B. (2023). Extracting urban areas of interest using HDBSCAN clustering method. *Journal of the Korean Cartographic Association*, 23(1), 67–77 (in Korean with English abstract). <https://doi.org/10.16879/jkca.2023.23.1.067>

- [1] Seong, J., **Kim, Y.**, Goh, H., Kim, H. & Stanescu, A. (2023). Measuring traffic congestion with novel metrics: A case study of six U.S. metropolitan areas. *ISPRS International Journal of Geo-Information*, 12(3), Article 130. <https://doi.org/10.3390/ijgi12030130>

### None Peer-Reviewed Reports

- [3] Kim, T. & **Kim, Y.** (2021). Hanbando Wetland—Topography, Geological Features, and Deposits. In Wetlands Research Team, National Institute of Ecology (Ed.), *4th Intensive Survey on the Wetland Protected Areas ('21)* (pp. 1293–1317). Seochon: National Institute of Ecology (in Korean).
- [2] Kim, T. & **Kim, Y.** (2020b). Topography/Landscape. In National Institute of Ecology (Ed.), *2020 Ecological Survey on National Coastal Sand Dunes (Jeju Island)* (pp. 21–378). Seochon: National Institute of Ecology (in Korean).
- [1] Kim, T. & **Kim, Y.** (2020a). Sinbulsan Wetland—Topography, Geological Features, and Deposits. In Wetlands Research Team, National Institute of Ecology (Ed.), *3rd Intensive Survey on the Wetland Protected Areas ('20)* (pp. 3–23). Seochon: National Institute of Ecology (in Korean).

## SCHOLARLY PRESENTATIONS

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### Oral Presentations

- [13] **Kim, Y.** & Eum, Y. (2025, November 23–24). *Graph attention-based accessibility modeling via origin-destination bipartite network*. 2025 Annual Meeting of the Southeastern Division of American Association of Geographers (SEDAAG), Lexington, KY, USA.
- [12] **Kim, Y.** (2025, April 11). *Advancing telehealth accessibility measurement with demographics-weighted two-step virtual catchment area (DW-2SVCA)*. Graduate Research Symposium 2025, University of North Carolina at Charlotte, Charlotte, NC, USA.
- [11] Eum, Y. & **Kim, Y.** (2025, March 24–28). *Evaluating the impact of light rail system expansion on e-scooter usage pattern changes in Charlotte, North Carolina*. 2025 Annual Meeting of the American Association of Geographers (AAG), Detroit, MI, USA.
- [10] **Kim, Y.** & Eum, Y. (2025, March 24–28). *Demographics-weighted two-step virtual catchment area (DW-2SVCA) for an improved telehealth accessibility measurement*. 2025 Annual Meeting of the American Association of Geographers (AAG), Detroit, MI, USA.
- [9] **Kim, Y.** (2024, November 20). *Exploring telehealth accessibility for mental healthcare in Mecklenburg County, North Carolina*. 2024 GIS Day, University of North Carolina at Charlotte, Charlotte, NC, USA.
- [8] **Kim, Y.** & Yang, B. (2023, October 20–23). *Analysis of changes in urban activity patterns after the COVID-19 pandemic using GeoAI and SNS data*. 2023 15th Korea-China-Japan Joint Conference on Geography, Seoul, South Korea.
- [7] **Kim, Y.**, Seong, J. & Yang, B. (2023, June 17). *Developing traffic congestion index based on space time cube and predicting vehicle crashes prone areas using machine learning*. 2023 Summer Conference of the Korean Urban Geographical Society, Cheongju, South Korea.

- [6] **Kim, Y.**, Seong, J., Goh, H. & Stanescu, A. (2023, March 23–27). *Modeling the probabilities of vehicle crashes using machine learning methods with congestion amounts and spatiotemporal features in Montgomery County, Maryland*. 2023 Annual Meeting of the American Association of Geographers (AAG), Denver, CO, USA.
- [5] Seong, J., **Kim, Y.**, Goh, H. & Stanescu, A. (2023, March 23–27). *Development of a traffic congestion index from spatiotemporal big data for urban transportation research and applications*. 2023 Annual Meeting of the American Association of Geographers (AAG), Denver, CO, USA.
- [4] Goh, H., Seong, J., **Kim, Y.** & Stanescu, A. (2023, March 23–27). *Does traffic congestion increase vehicle crashes? a regional scale study with a novel congestion index and machine learning methods*. 2023 Annual Meeting of the American Association of Geographers (AAG), Denver, CO, USA.
- [3] **Kim, Y.** & Yang, B. (2022, December 10). *Analysis of spatiotemporal change in the urban landscape using GeoAI and social media images: Comparison of the period before and after covid-19*. 2022 Winter Conference of the Korean Urban Geographical Society, Seoul, South Korea.
- [2] **Kim, Y.**, Goh, H., Seong, J. & Stanescu, A. (2022, November 20–21). *Development of a method to summarize metropolitan traffic amount*. 2022 Annual Meeting of the Southeastern Division of American Association of Geographers (SEDAAG), Atlanta, GA, USA.
- [1] **Kim, Y.** & Yang, B. (2022, February 25–March 1). *Exploring the spatiotemporal patterns of urban characteristics using social big data and GeoAI*. 2022 Annual Meeting of the American Association of Geographers (AAG), Virtual.

### Poster Presentations

- [1] Kim, S., **Kim, Y.**, Lee, T., Yang, B., Park, J. K. & Kim, T. H. (2024, June 27–28). *Analysis of non-implementation of public surveying performance review for institutional improvement*. 2024 Annual Meeting of the Korean Geographical Society, Seoul, South Korea.

### AWARDS AND HONORS

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**First Place**, Presentation Competition on GIS Day 2024, November 2024  
GIS Day Organization Committee, University of North Carolina at Charlotte.

**Certificate of Appreciation**, June 2024  
The Korean Geographical Society.

**Young Geographers Award–Best Paper**, October 2023  
The 15th Korea-China-Japan Joint Conference on Geography.

**Geospatial Information Workforce Development Scholarship**, Fall 2021–Spring 2023  
Ministry of Land, Infrastructure and Transport of Korean Government.

**Dongguk Future Leaders Scholarship**, Fall 2021  
Graduate School of Dongguk University.

<b>Magna Cum Laude,</b> Department of Geography Education, Dongguk University.	August 2021
<b>Academic Scholarship,</b> Department of Geography Education, Dongguk University.	Spring 2021
<b>Off-Campus Scholarship,</b> Silla Culture Scholarship Foundation.	Fall 2020
<b>Academic Scholarship,</b> Department of Geography Education, Dongguk University.	Spring 2020
<b>Academic Scholarship,</b> Department of Geography Education, Dongguk University.	Fall 2019

#### ACADEMIC & COMMUNITY SERVICE

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<b>Administrative Manager, Organizing Committee</b> The 15th Korea-China-Japan Joint Conference on Geography, Seoul, South Korea	2023
<b>President of Student Council</b> Department of Geography Education, Dongguk University	2020
<b>Auxiliary Police</b> Military Service at Korean National Police Agency	Jan 2017–Oct 2018

#### PROFESSIONAL SOCIETY MEMBERSHIPS

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- [American Association of Geographers \(AAG\)](#)
- [Korean-American Scientists and Engineers Association \(KSEA\)](#)
- [Korea-America Association for Geospatial and Environmental Sciences \(KAGES\)](#)
- [The Korean Geographical Society \(KGS\)](#)

#### CERTIFICATES & TECHNICAL SKILLS

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<b>Teacher's Certificate</b> , the Secondary School Teacher (Grade II) of Geography Ministry of Education of Korean Government	2021
<b>Engineer Surveying Geo-Spatial Information</b> Human Resources Development Service of Korea	2021
<b>Information Technology Qualification (ITQ)</b> , Office Automation (OA) Master Korea Productivity Center	2018
<b>Word Processor User Level-1</b> The Korea Chamber of Commerce & Industry	2017
<b>Strong Skill with GIS Softwares: ArcGIS, QGIS</b>	
<b>Strong Skill in Programming Languages: Python, R</b>	