

Yunsik Kim

Curriculum Vitae

The University of North Carolina at Charlotte

Department of Earth, Environmental and Geographical Sciences

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Charlotte, NC 28223, U.S.A.

Email: ykim89@charlotte.edu

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

Google Scholar: [Link](#)

LinkedIn: [Link](#)

RESEARCH INTERESTS

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

EDUCATION

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

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

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

Administrative Assistant

Mar 2024–Jun 2024

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

PUBLICATIONS

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

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

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.

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

ACADEMIC & COMMUNITY SERVICE

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

PROFESSIONAL SOCIETY MEMBERSHIPS

- [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

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