

Woojin Park

Ph.D. Student in Transportation Engineering

Department of Civil, Structural and Environmental Engineering | University at Buffalo
101 Ketter Hall, Buffalo, NY 14260

[✉ wpark6@buffalo.edu](mailto:wpark6@buffalo.edu) [🌐 Homepage](#) [🌐 LinkedIn](#)

EDUCATION

University at Buffalo, The State University of New York

Buffalo, NY

Ph.D. in Civil Engineering (Transportation Engineering)

Aug. 2026 -

– Advisor: Austin Valentine Angulo, TRAVL Lab

Chung-Ang University

Seoul, South Korea

M.S. in Civil Engineering (Urban Engineering)

Mar. 2023 – Feb. 2025

– Master's Thesis: *Pedestrian Perception and Emotional Responses to Autonomous Vehicles – An Integrated Approach with Virtual Reality, Computer Vision, and Vital Signs Analysis*

– Honors: Young Scholar Award by Lim Yong-taek Award

Chung-Ang University

Seoul, South Korea

B.S. in Civil Engineering (Urban Design and Studies)

Mar. 2017 – Feb. 2023

– Undergraduate Thesis: *A Study on Walkability and Gentrification by Opening up Korean Presidential Residence*

– Honors: Recognized as an Excellent Graduate by the Korea Institute of Urban Design

SKILLS & INTERESTS

Research Interests

Active Mobility | Computer Vision | Virtual Reality (VR) | Vision-Language Model (VLM)

Programming

Python, C#, C++, Julia

AI

PyTorch, Deep Learning, Reinforcement Learning

Simulation

VR (Unity, Unreal Engine), VISSIM, SUMO

Statistics

Mplus, SPSS, STATA

GIS & Design

QGIS, ArcGIS, AutoCAD, SketchUp, Adobe Suite

PUBLICATIONS

1. **Park, W.**, Son, D., Im, B., Her, J., Kim, Y.-J., & Kim, S.-N. (2025). Fear of crime revisited: analyzing the effects of urban nighttime illuminance on neural and psychological responses using recorded virtual environments and electroencephalogram data. *Virtual Reality*, 29, 145. doi.org/10.1007/s10055-025-01211-3
2. Son, D., Im, B., Her, J., **Park, W.**, Kang, S. J., & Kim, S. N. (2024). Street lighting environment and fear of crime: a simulated virtual reality experiment. *Virtual Reality*, 29(1), 1–17. doi.org/10.1007/s10055-024-01080-2
3. **Park, W.**, Ko, H., & Kim, S.-N. (2024). An analysis of threshold access time and distance to age-friendly facilities: A comparison between senior and pre-senior populations. *SH Urban Research & Insight*, 14(3), 75–96. [doi:10.26700/shuri.2024.12.14.3.73](https://doi.org/10.26700/shuri.2024.12.14.3.73)

CONFERENCE PRESENTATIONS

- **Park, W.**, & Kim, S.-N. (2024). Pedestrian perception on streets with autonomous vehicles. *ACSP 2024*, Seattle, WA, USA. [Oral Presentation]
- **Park, W.**, & Kim, S.-N. (2024). Analysis of electroencephalogram and fear of crime perception in virtual reality. *Urban Design Asia 2024*, Seoul, ROK. [Oral Presentation]
- **Park, W.**, & Kim, S.-N. (2023). Pedestrian perceptions of street environments during the phased introduction of smart mobility. *In Proceedings of IEEE Smart World Congress (SWC)*, Portsmouth, UK. [Oral Presentation]
- **Park, W.**, & Kim, S.-N. (2023). Analysis of biometric data in virtual reality. *KSCE & KST Joint Conference*, Busan, South Korea. [Oral Presentation]

WORK EXPERIENCE

- The Seoul Institute** *Researcher* Oct. 2025 – Jul. 2026
- Analysis of Street Networks for Redevelopment Projects
 - A Study on Preliminary Planning for Big Data and AI-driven Urban Planning Support in Seoul
- Chung-Ang University Industry-Academic Foundation** *Researcher* Mar. 2025
- Development of a Risk Perception and Behavior Prediction Model for Pedestrian Accident-Prone Areas
- Chung-Ang University** *Student Researcher* Mar. 2023 – Feb. 2025
- Development of Urban Planning Technology using Big Data and AI
 - Development of a Pedestrian Environment Assessment System for a Super-Aged Society
 - **Development of Strategies for Creating Age-Friendly Cities***
 - **Building a Healthy City Model and Promoting Active Design***
 - **Research on Pedestrian Environment Changes due to the Introduction of Smart Mobility***
 - Evaluation of Child Traffic Safety Design using a Multi-stage VR Simulator
- Architecture & Urban Research Institute** *Research Assistant* Apr. 2022 – Aug. 2022
- Analysis of Crime Prevention Through Environmental Design (CPTED) using VR
- Republic of Korea Air Force** *Staff Sergeant* Jan. 2019 – Nov. 2020
- 15th Special Missions Wing / Seoul Air Base (K-16 AIR BASE)

*Denotes projects where I served as lead student researcher.

HONORS AND AWARDS

- Young Scholar Award, Master's Thesis | *The 3rd Lim Yong-taek Award for Excellent Paper Competition*
- Award for Academic Contribution, Master's Thesis | *Dept. of Urban Engineering, Chung-Ang University*
- Excellent Graduate Award, Urban Design | *Urban Design Institute of Korea*
- Excellence Award, Undergraduate Graduation Exhibition | *Chung-Ang University*
- Grand Prize, The 4th University Student Idea & Paper Competition | *Incheon Metropolitan City*
- Completion of Mentoring Program, Mentee | *Architecture & Urban Research Institute (AURI)*
- First Prize, Dongjak-gu Transportation Service Area Design | *Chung-Ang University Campus Town Landscape Design Contest*

SCHOLARSHIPS

- Graduate Research Scholarship (\$33,000/year), *University at Buffalo* (Aug. 2026 – Present)
- Young Scholar Award (\$1,500), *MESH (Mobility Ecology Summit Hour)* (Aug. 2025)
- Graduate Research Scholarship (\$20,000), *Chung-Ang University* (Mar. 2023 – Feb. 2025)
- Senior Scholarship (\$800), *Chung-Ang University* (Mar. 2022 – Jul. 2022)
- Academic Improvement Scholarship (\$700), *Chung-Ang University* (Sep. 2021 – Dec. 2021)

TEACHING & OTHER ACTIVITIES

- Interpreter & Outreach Support for CES 2025, *Seoul Business Agency (SBA)* (Jan. 2025)
- Youth Advisory Board Member (Telecommunications & Mobility), *Personal Information Protection Commission* (Oct. 2024)
- Facilitator, *Summit for Democracy 2024* (2024)
- Fellow, *KFAS Korea-Nordic Sustainable Development Goals (SDGs) Program* (Jan. 2024 – Aug. 2024)
- Teaching Assistant for GIS (7 credits), *Chung-Ang University* (Spring 2024)
- Mentor for Undergraduate Researchers, *Chung-Ang University* (Oct. 2023 – Dec. 2023)
- Educational Volunteer (Architecture, Transportation), *Korea Student Aid Foundation (KOSAF) Talent Donation Camp* (Jul. 2021 – Aug. 2021)