

Minkyun Seo

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EDUCATION

Seoul National University (SNU) Integrated Ph.D. Program in Computer Science and Engineering	Sep. 2025 – Present Seoul, Republic of Korea
• Advised by Prof. Jaesik Park at the Visual & Geometric Intelligence Lab • GPA: 4.07/4.3	
Seoul National University (SNU) B.S. in Architectural Engineering, Computer Science and Engineering	Mar. 2019 – Aug. 2025 Seoul, Republic of Korea
• Summa Cum Laude , GPA: 3.93/4.3 (cumulative), 4.01/4.3 (CSE major) • Best BS Thesis Award : Towards Zero-Shot Point Cloud Registration across Diverse Environments • Jul. 2021 – Jan. 2023: Absence for mandatory military service	
Sejong Science High School Specialized High School for Gifted Students in Science and Mathematics	Mar. 2016 – Feb. 2019 Seoul, Republic of Korea

RESEARCH INTEREST

- Geometric Feature Learning, 3D Reconstruction, 3D Vision for Robotics Applications

PUBLICATION

1. Hyungtae Lim*, Minkyun Seo*, Luca Carlone, Jaesik Park†, “Towards Zero-Shot Point Cloud Registration Across Diverse Scales, Scenes, and Sensor Setups”, *arXiv preprint*, 2026
2. Minkyun Seo*, Hyungtae Lim*, Kanghee Lee, Luca Carlone, Jaesik Park†, “BUFFER-X: Towards Zero-Shot Point Cloud Registration in Diverse Scenes”, *Int. Conf. on Computer Vision (ICCV)*, 2025 (**Highlight**) [code]

RESEARCH EXPERIENCE

Visual & Geometric Intelligence Lab (PI: Jaesik Park) SNU Research Intern	Dec. 2023 – Aug. 2025 Seoul, Republic of Korea
• Worked on generalizable point cloud registration for diverse real-world conditions	
AIoT Lab (PI: Hyung-Sin Kim) SNU Research Intern	Jun. 2023 – Sep. 2023 Seoul, Republic of Korea
• Contributed to early-stage research on Covariate Shifts in Environment and Sensor Domain	

PROJECTS

[P1] FastMRI Challenge, SNU	Jun. 2024 – Sep. 2024
• Implemented various memory optimization strategies to improve computational efficiency during training	
[P2] Drone-Based 3D Reconstruction of SNU Lecture Hall	Apr. 2024 – Jun. 2024
• Reconstructed a 3D mesh model of the Lecture Hall at SNU from images captured using a drone • Analyzed conditions leading to poor 3D reconstruction outcomes, emphasizing the need for methods that address the limitations of real-world data collection	
[P3] Department Office Chatbot	May. 2024
• Developed a chatbot to assist with administrative office tasks using RAG and InstructGPT • Integrated a diffusion model to provide contextualized responses with enhanced user experience	

[P4] Avatar Texture Enhancement via 3D Patch-wise Loss	Sep. 2023 – Dec. 2023
<ul style="list-style-type: none"> Improved avatar texture reconstruction by mitigating oversaturation of dominant colors caused by L1 loss Introduced new evaluation metrics to address the absence of quantitative evaluation for texture reconstruction 	
[P5] PlayEye: Toy for Preventing Child Myopia	May. 2023 – Sep. 2023
<ul style="list-style-type: none"> Developed child-friendly physical toy and software UI for efficient eye exercise and cognitive development Implemented software to detect eye movement and manage audio, visual, and haptic I/Os 	

[P6] You Only Cook Once	Dec. 2022 – Mar. 2023
<ul style="list-style-type: none"> Developed a cooking assistant AI which predicts the doneness of ingredients 	

SCHOLARSHIPS AND AWARDS

Graduate Research Fellowship DB Group	Sep. 2025 – Present
National Excellence Scholarship Korea Student Aid Foundation	Mar. 2021 – Jun. 2024
<ul style="list-style-type: none"> Full tuition awarded to the top-performing students in science and engineering across the nation 	
Merit-based Scholarship SNU	Sep. 2019 – Feb. 2021, Jul. 2024 – Dec. 2024
Grand Prize, Creative Engineering Design Fair SNU Engineering [P5]	Sep. 2023
<ul style="list-style-type: none"> Received a travel grant to Mobile World Congress(MWC) 2024 in Barcelona, Spain 	
Grand Prize, National ICT Smart Device Contest Ministry of Science and ICT [P5]	Aug. 2023
Grand Prize, Ambient AI Competition SNU Graduate School of Data Science [P6]	Mar. 2023
Second Prize, FriendliAI LLM hackathon FriendliAI [P3]	May. 2024
Certificate of Appreciation Republic of Korea Army	Jan. 2023
Grand Prize, Military AI Specialist Program Republic of Korea Army	Dec. 2022

EXTRACURRICULAR ACTIVITIES

CES 2025 SNU Pavilion Student Supporter	Nov. 2024 – Jan. 2025
<ul style="list-style-type: none"> Represented Tommoro Robotics, providing in-depth technical explanations of the company's core technologies 	
AttentionX, AI Research Group	Jun. 2024 – Dec. 2024
Leader, SNU Engineering Honor Society (STEM)	Mar. 2023 – Mar. 2025
<ul style="list-style-type: none"> Served as the representative of the 14th generation of STEM, leading the top-performing engineering student society where 25 students are selected annually from 3,000+ engineering students. Operated STEMentor: Major snapshot program to provide introductions and insights on engineering courses Introduced and deployed the STEM Intranet platform Delivered multiple academic seminars focused on advanced topics in Computer Vision 	
Vision Mentoring & Vision Exhibition	Mar. 2023 – Present
<ul style="list-style-type: none"> Conducting biannual mentoring sessions for 500+ underclassmen and high school students Delivered lectures providing an overview of core computer science courses and their applications 	
Presidential Security Service Military Service	Jul. 2021 – Jan. 2023
<ul style="list-style-type: none"> Provided security service for the President, immediate family and the Blue House, the presidential residence 	
SNU Sunshine Volunteer Habitat for Humanity International	Mar. 2020 – Jun. 2021
<ul style="list-style-type: none"> Led 7 projects assisting low-income households by crafting wooden furniture and repairing homes 	