Seongmin Jung

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Research Interest

Multimodal Robot Learning, Vision-Language(-Action) Models, 3D Computer Vision, Embodied AI

Education

Seoul National University — Sep 2024 – Aug 2026 (Expected)
M.S. in Artificial Intelligence (Advisor: Prof. Jongwoo Lim) — Seoul, South Korea
GPA: 4.24/4.30

Yonsei University — Mar 2019 – Feb 2024
B.S. in Electrical and Electronic Engineering — Seoul, South Korea
GPA: 4.02/4.30 • Graduated with **High Honors (Top 3% in college)**

Case Western Reserve University — Aug 2022 – May 2023
Exchange Program — Cleveland, OH, USA

Honors and Awards

The National Scholarship for Science and Engineering — 2019 – 2024
Korea Student Aid Foundation(KOSAF) — Seoul, South Korea
- Full merit-based scholarship awarded to top STEM students by the South Korean government, covering full tuition.

High Honors — Fall 2019
Dept. of Electrical & Electronic Engineering, Yonsei University — Seoul, South Korea

Highest Honors — Spring 2019
Dept. of Electrical & Electronic Engineering, Yonsei University — Seoul, South Korea

Preprints & Manuscripts

[1] **Seongmin Jung***, Seongho Choi*, Gunwoo Jeon, Minsu Cho, and Jongwoo Lim. PanoGrounder: Bridging 2D and 3D with Panoramic Scene Representations for VLM-based 3D Visual Grounding. *CVPR 2026, under review.* Project Page: https://choiseongho-h.github.io/PanoGrounder

Research Experiences

AI4CE Lab, *New York University* — Nov 2025 – Present
Internship (Remote, Advisor: Prof. Chen Feng) — New York City, NY, USA
Tactile-Informed Imitation Learning
- Developing visual–tactile imitation learning policies that combine low-frequency visual inputs with high-rate tactile feedback for contact-rich manipulation.

Biological Cybernetics Lab, *Yonsei University* — Jul 2023 – Dec 2023
Undergraduate Thesis (Advisor: Prof. DaeEun Kim) — Seoul, South Korea
Autonomous Navigation for High-Speed Ground Robot
- Implemented low-latency obstacle avoidance and path planning using ROS and LiDAR odometry.
- Deployed on a Raspberry-Pi-powered RC car achieving high-speed navigation at 5 m/s.

Selected Course Projects

Solving Rubik's Cube with Bimanual Robot Hands — Fall 2025
AI Robotics: Robot Foundation Model (M2794.009600)
- Collected VR teleoperation data on a Fourier GR-1 bimanual humanoid robot in Isaac Lab using a Meta Quest 3.
- Fine-tuned an open-source VLA (GR00T N1.5) for stable grasping and rotation of Rubik's Cube faces.

Neural SLAM with Point Cloud Projection for Faster RGB-D Tracking — Fall 2024
Deep Learning (M2177.003100, Instructor: Prof. Jonghyun Choi)
- Proposed a differentiable point cloud projection–based camera pose tracker, replacing NeRF queries along camera rays.
- Implemented the method on an existing neural SLAM system, achieving over 3× faster tracking while preserving trajectory accuracy.

Professional Experience

Mobiltech — Aug 2023 – Jun 2024
Research Assistant — Seoul, South Korea
Enhancing Pose Tracking in Urban Scenes
- Developed a LiDAR odometry pipeline using per-frame height maps of surrounding structures, improving pose-tracking accuracy and robustness in dense urban scenes.

Isaac Sim Environment for Heterogeneous Multi-Robot Systems
- Implemented a heterogeneous multi-robot simulation with ground and aerial platforms in NVIDIA Isaac Sim, integrating per-robot control and sensor setups in ROS.

Teaching Experiences

Digital Computer Concept and Practice (F37.202), ***Seoul National University*** Spring 2025
Teaching Assistant Seoul, South Korea

- Led weekly C++ programming lab sessions and developed course materials and assignments.

Patents

[1] Y. Lee, **S. Jung**, J. Jo, and Y. Kim. 2023. Apparatus for collecting cigarette butts with IoT. Korea Patent 10-2023-0166309, filed November 27, 2023.

[2] Y. Lee, **S. Jung**, J. Jo, and Y. Kim. 2023. Method for managing of device for collecting cigarette butts with IoT using AI. Korea Patent 10-2023-0166310, filed November 27, 2023.

Club Activities

CWRUbotix, *Robotics Club at Case Western Reserve University* Dec 2022 – Jun 2023
MATE ROV World Championship 2023 Cleveland, Ohio

- Constructed underwater robot simulation for mission environment using ROS and Gazebo Simulation.
- Designed and implemented an Arduino-based wireless communication module for mission execution.

VERY, *Entrepreneurship Club at Yonsei University* Mar 2021 – Feb 2022
Team Lead Seoul, South Korea

- Established online music ensemble platform based on self-recording for college bands.
- Led a 4-member team, coordinating operations, design, and development throughout the project.

Leadership

Korean Mentor Sep 2023 – Aug 2024
Office of International Affairs, Yonsei University Seoul, South Korea

- Mentored 10 incoming study-abroad students, aiding in cultural and academic adaptation in Korea.

President of Student Council Nov 2020 – Oct 2021
Dept. of Electrical & Electrical Engineering, Yonsei University Seoul, South Korea

- Led key events including freshmen orientation and homecoming, organizing 300+ students.

Technical Skills

Programming languages: Python, C/C++, MATLAB

Robotics: Isaac Sim, Isaac Lab, ROS 1 & 2

Languages: Korean (native), English (fluent)

- TOEFL iBT: 108 (Reading: 30, Listening: 29, Speaking: 24, Writing: 25)