

Seongmin Jung

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INTERESTS

3D Computer Vision, Scene Understanding, Mobile Robotics & Manipulation, Generative Models

EDUCATION

- **Seoul National University** Sep. 2024 - Present
M.S. in Artificial Intelligence
◦ GPA: 4.24/4.30
◦ Robot Vision Laboratory (Advisor: Prof. Jongwoo Lim) Seoul, South Korea
- **Yonsei University** Mar. 2019 - Feb. 2024
B.S. in Electrical and Electronic Engineering
◦ GPA: 4.02/4.30
◦ Graduated with High Honors Seoul, South Korea
- **Case Western Reserve University** Aug. 2022 - May. 2023
Exchange Program Cleveland, Ohio

RESEARCH EXPERIENCE

- **PanoGrounder: Bridging 2D and 3D with Panoramic Scene Representations for VLM-based 3D Visual Grounding**
Manuscript in preparation
◦ Built a pipeline that renders panoramas from 3D reconstructions and uses a VLM to ground text-described objects
◦ Modified vision encoder of a VLM to fuse rendered feature maps (e.g., DINO) with RGB
◦ Achieved SOTA accuracy and robust cross-dataset generalization on 3DVG benchmarks
- **CT-based Prostate Volume Estimation Using V-Net Segmentation**
Manuscript in preparation
◦ Achieved 57% error reduction compared to ultrasound-based estimation
- **High-Speed Autonomous Navigation with Obstacle Avoidance** Fall 2023
Undergraduate Thesis Yonsei University
◦ 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

WORK EXPERIENCE

- **Mobiltech** Aug. 2023 - Jun. 2024
Research Assistant Seoul, South Korea
◦ Engineered multi-robot simulation with individual robot controller and sensor setup in ROS and Isaac Sim

TEACHING EXPERIENCE

- **Digital Computer Concept and Practice (F37.202)** Spring 2025
Teaching Assistant Seoul National University
◦ 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.

SKILLS

- **Programming Languages:** Python, C/C++, MATLAB
- **Robotics:** ROS 1 & 2, Gazebo Simulation, Isaac Sim

HONORS AND AWARDS

- **The National Scholarship for Science and Engineering** 2019 - 2024
Korea Student Aid Foundation
- **High Honors** Fall 2019
Dept. of Electrical & Electronic Engineering
- **Highest Honors** Spring 2019
Dept. of Electrical & Electronic Engineering

OTHER ACTIVITIES

- **CWRUbotix – Robotics Club** Dec. 2022 – Jun. 2023
MATE ROV World Championship 2023 Case Western Reserve University
 - Developed underwater robot simulation for mission environment using ROS and Gazebo Simulation
- **VERY – Entrepreneurship Club** Mar. 2021 – Feb. 2022
Groovle Yonsei University
 - Established online music ensemble platform based on self-recording for college bands

LEADERSHIP

- **Korean Mentor** Sep. 2023 - Aug. 2024
Office of International Affairs, Yonsei University
 - Mentored 10 incoming study-abroad students, aiding in cultural and academic adaptation in Korea
- **President of Student Council** 2021
Dept. of Electrical & Electrical Engineering
 - Initiated transition of departmental social events to online format, organizing 300+ students
 - Led key events including online freshmen orientation and virtual homecoming

LANGUAGES

English: TOEFL IBT: 105 (Reading: 29, Listening: 25, Speaking: 25, Writing: 26)