

Taewoong Kim

✉ twoongg.kim@snu.ac.kr ☎ (+82) 10-8504-5791 🏠 twoongg.github.io 🌐 twoongg in taewoongkim

★ Research Interests

Embodied AI, Multimodal learning, Few-shot/zero-shot learning, Reinforcement learning

🎓 Education

Yonsei University Mar. 2023 – Aug. 2024

M.S. in Artificial Intelligence (Advisor: Prof. Jonghyun Choi)

- Overall GPA: 4.04/4.3
- Relevant Coursework : Multimodal Deep Learning, Machine Learning and Programming

Yonsei University Mar. 2016 – Aug. 2023

B.S. in Mechanical Engineering

- Major GPA: 4.16/4.3, Overall GPA: 3.83/4.3
- Relevant Coursework : Dynamics, Mechatronics, Mechanical System Control, Intelligent Control

📄 Research Papers

A paper about zero-shot affordance grounding using GenAI Under Review

B. Kim, T. Kim, J. Nam, J. Min, J. Kim, J. Kim, H. Kim, H. Jeon, J. Choi

Multi-Modal Grounded Planning and Efficient Replanning For Learning Embodied Agents with A Few Examples AAAI 2025
(to appear)

T. Kim, B. Kim, J. Choi

ReALFRED: An Embodied Instruction Following Benchmark in Photo-Realistic Environments ECCV 2024

T. Kim, C. Min*, B. Kim, J. Kim, W. Jeong, J. Choi*

ECLAIR: Event-Cognizant Language Interaction Embodied Robots Workshop on LA4IRA
IEEE RO-MAN 2023

J. Kim, B. Kim, C. Min, Y. Kim, T. Kim, J. Choi

📖 Research Experience

SNU Machine Perception and Reasoning Lab Seoul National University

Research Assistant (Advisor: Prof. Jonghyun Choi)

Sep. 2024 – Current

- **Zero-shot affordance grounding**
 - Implemented image generation models to achieve zero-shot affordance grounding
 - Developed a framework that treats occlusions as interaction signals to identify affordance regions

Yonsei Vision & Learning Lab Yonsei University

Graduate Research Assistant (Advisor: Prof. Jonghyun Choi)

Mar. 2023 – Aug. 2024

- **Large language models (LLMs) as few-shot planners for embodied agents**
 - Developed a multimodal planner with LLM for enhanced grounded planning capabilities
 - Designed an efficient replanning system that corrects partially misleading subgoals
- **Bridging the reality gap**
 - Proposed a photo-realistic benchmark with 3D-captured indoor scenes with interactive objects

🏢 Work Experience

Samsung Electronics Suwon, Korea

Full-Time Engineer, Robot Business Team

Sep. 2022 - Jan. 2023

- Designed and developed mechanical components for exoskeleton robot

Samsung Electronics Suwon, Korea

Intern, Mobile Experience Division

July. 2021 - Aug. 2021

- Conducted personal project about foldable mobile devices

Honors and Awards

Outstanding Paper Award (Gold Prize), IPIU 2025	Feb. 2025
Outstanding Graduate Thesis Award, Yonsei University	Feb. 2025
Outstanding Paper Award (Silver Prize), IPIU 2024	Feb. 2024
1st Place Award, CVPRW 2023 Embodied AI Workshop Challenge	June 2023
Academic High Honors Award, Yonsei University	Fall 2019, Fall 2020
Academic Honors Award, Yonsei University	Spring 2019
Academic Scholarship, Gwacheon City	Spring 2020 - Fall 2020
Volunteer Scholarship, Yonsei University	Spring 2019 - Fall 2019
Veritas (Academic) Scholarship, Yonsei University	Fall 2019, Spring 2019, 2020, 2021, 2022

Leadership Experience

School of Mechanical Engineering at Yonsei University	Dec. 2018 - Dec. 2019
56th Student President	
◦ Organized, led, and made decisions for the department and student council	
Military Service for Republic of Korea	Apr. 2017 - Jan. 2019
Sergeant	
◦ Served as machine gun shooter at The 17th Infantry Division, Republic of Korea Army	

Teaching Experience

Teaching Assistant, Seoul National University	Fall 2024
TA for graduate AI seminar	
◦ Managed and addressed students' requests	

Volunteer Experience

Korean University Mentors Union	Sept. 2020 - Feb. 2021
Mentor	
◦ Conducted major-specific information sessions and addressed high school students' questions	

Academic Services

Reviewer: RO-MAN'24

Skills

Languages	Korean (Native), English (Fluent)
Programming	Python, C, MATLAB
CAD/CAE	NX, Ansys, PTC Creo
General	GitHub, LaTeX, PyTorch