

Byeonghwi Kim

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Research Interest

Embodied AI, Robotics, Autonomous Agents, Multimodality

Experience

Allen Institute for AI (AI2) [🔗](#), Research Intern

- Mentor: [Dr. Roozbeh Mottaghi](#) [🔗](#)

Seattle, WA, USA
Sept. 2021 - Mar. 2022

Education

Ph.D. Seoul National University | Electrical and Computer Engineering

- Advisor: [Jonghyun Choi](#) [🔗](#)

Sept. 2024 - Present

Ph.D. Yonsei University | Artificial Intelligence

Course • Advisor: [Jonghyun Choi](#) [🔗](#)

Sept. 2022 - Aug. 2024

M.S. Gwangju Institute of Science and Technology (GIST) | Artificial Intelligence

- *GIST President Fellowship*
- Advisor: [Jonghyun Choi](#) [🔗](#)

Mar. 2020 - Aug. 2022

B.S. Kwangwoon University | Computer Engineering

- *Graduated with First-Class Honors* (GPA: 4.42/4.50, Rank: 1/74)
- Advisor: [Cheolsoo Park](#) [🔗](#)

Mar. 2013 - Feb. 2020

Publications

ReALFRED: An Embodied Instruction Following Benchmark in Photo-Realistic Environments [🔗](#)

Taewoong Kim*, Cheolhong Min*, **Byeonghwi Kim**, Jinyeon Kim, Wonje Jung, Jonghyun Choi
ECCV 2024 (**To appear**)

Online Continual Learning for Interactive Instruction Following Agents [🔗](#)

Byeonghwi Kim*, Minhyuk Seo*, Jonghyun Choi
ICLR 2024, CoLLAs 2024 Workshop Track

Context-Aware Planning and Environment-Aware Memory for Instruction Following Embodied Agents [🔗](#)

Byeonghwi Kim, Jinyeon Kim, Yuyeong Kim, Cheolhong Min, Jonghyun Choi
ICCV 2023

Multi-Level Compositional Reasoning for Interactive Instruction Following [🔗](#)

Suvaansh Bhambri*, **Byeonghwi Kim***, Jonghyun Choi
AAAI 2023 (Oral)

Factorizing Perception and Policy for Interactive Instruction Following [🔗](#)

Kunal Pratap Singh*, Suvaansh Bhambri*, **Byeonghwi Kim***, Roozbeh Mottaghi, Jonghyun Choi
ICCV 2021

Agent with the Big Picture: Perceiving Surroundings for Interactive Instruction Following [🔗](#)

Byeonghwi Kim, Suvaansh Bhambri, Kunal Pratap Singh, Roozbeh Mottaghi, Jonghyun Choi
Embodied AI Workshop @ CVPR 2021

Automated White Blood Cell Counting in Nailfold Capillary Using Deep Learning Segmentation and Video Stabilization [🔗](#)

Byeonghwi Kim*, Yuli Sun Hariyani*, Young-Ho Cho, Cheolsoo Park
Sensors 2020

Academic Service

Reviewer/Program Committee Member: CVPR (2023-2024), ECCV (2024), ICLR (2024), ICML (2024), NeurIPS (2023-2024), AAAI (2024-2025), WACV (2023-2025), ICRA (2022), RO-MAN (2024)

Honors and Awards

- Silver Prize:** Graduate School Innovation Outstanding Paper Awards (Yonsei University) Jul. 2024
- [Context-Aware Planning and Environment-Aware Memory for Instruction Following Embodied Agents](#)
- Silver Prize:** Outstanding Paper Awards (IPIU 2024, South Korea) Feb. 2024
- [Multi-Modal Grounded Planning and Efficient Replanning for Learning Embodied Agents with A Few Examples](#)
- Bronze Prize:** Outstanding Paper Awards (IPIU 2024, South Korea) Feb. 2024
- [Online Continual Learning for Interactive Instruction Following Agents](#)
- Bronze Prize:** Graduate School Innovation Outstanding Paper Awards (Yonsei University) Jul. 2023
- [Multi-Level Compositional Reasoning for Interactive Instruction Following](#)
- 1st Place:** Generalist Language Grounding Agents Challenge (CVPRW'23) Jun. 2023
- [ECLAIR: Event-Cognizant Language Interaction Robots](#)
- 2nd Place:** ALFRED Challenge (CVPRW'21) Jun. 2021
- [Agent with the Big Picture: Perceiving Surroundings for Interactive Instruction Following](#)
- 2nd Place:** ALFRED Challenge (ECCVW'20) Aug. 2020
- [Improving Mask Prediction for Long Horizon Instruction Following](#)

Teaching Experience

- Teaching Assistant @ Korea Telecom (KT)**
- [KT-SNU AI Training Course - Computer Vision](#) Jul. 2024
- Teaching Assistant @ Seoul National University**
- [Deep Learning](#) Fall 2024
 - [Introduction to Random Variables and Random Processes](#) Spring 2024
- Teaching Assistant @ Yonsei University**
- [Deep Learning - Theory and Practice](#) Fall 2022, Spring 2023, Fall 2023
- Teaching Assistant @ LG Electronics**
- [AI Advanced Course for CTO \(Object Detection, Continual Learning\)](#) Jul. 2023
- Teaching Assistant @ Samsung Electronics**
- [AI Expert Program \(Continual Learning\)](#) Jul. 2022, Jul. 2023
 - [AI Expert Program \(Object Detection\)](#) Jul. 2023
- Teaching Assistant @ Samsung Advanced Technology Training Institute**
- [AI Academy for Application - Vision \(Object Detection, Continual Learning\)](#) Aug. 2022, Dec. 2022, Jul. 2023
- Teaching Assistant @ Gwangju Institute of Science and Technology**
- [Machine Learning and Deep Learning](#) Spring 2021

Presentation

- Poster presentation (Embodied AI) @ AI SEOUL 2024 Feb. 2024
- Invited talk (Embodied AI) @ LG AI Research Jun. 2023
- Invited talk (Embodied AI) @ Electronic & Information Research Information Center May 2023

References

References will be provided upon request.