

# Byeonghwi Kim

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🔗 [bhkim94.github.io](https://github.com/bhkim94)

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🔗 [bhkim94](https://github.com/bhkim94)

## Research Interest

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Embodied AI, Robotics, Autonomous Agents, Multimodality

## Experience

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

Seattle, WA, USA

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

Sept. 2021 - Mar. 2022

## Education

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

Sept. 2024 - Present

- Advisor: [Jonghyun Choi](#) [🔗](#)

**Ph.D. Yonsei University** | Artificial Intelligence

Sept. 2022 - Aug. 2024

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

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

Mar. 2020 - Aug. 2022

- *GIST President Fellowship*

- Advisor: [Jonghyun Choi](#) [🔗](#)

**B.S. Kwangwoon University** | Computer Engineering

Mar. 2013 - Feb. 2020

- *Graduated with First-Class Honors* (GPA: 4.42/4.50, Rank: 1/74)

- Advisor: [Cheolsoo Park](#) [🔗](#)

## Publications

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**Pre-emptive Action Revision by Environmental Feedback for Embodied Instruction Following Agents** [🔗](#)

Jinyeon Kim\*, Cheolhong Min\*, **Byeonghwi Kim**, Jonghyun Choi

CoRL 2024 **(To appear)**

**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

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

## Honors and Awards

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- 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](#)
- 1<sup>st</sup> Place:** Generalist Language Grounding Agents Challenge (CVPRW'23) Jun. 2023
- [ECLAIR: Event-Cognizant Language Interaction Robots](#)
- 2<sup>nd</sup> Place:** ALFRED Challenge (CVPRW'21) Jun. 2021
- [Agent with the Big Picture: Perceiving Surroundings for Interactive Instruction Following](#)
- 2<sup>nd</sup> Place:** ALFRED Challenge (ECCVW'20) Aug. 2020
- [Improving Mask Prediction for Long Horizon Instruction Following](#)

## Teaching Experience

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- 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, Sept. 2024
  - [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

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- 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

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References will be provided upon request.