

# Byeonghwi Kim

✉ [byeonghwikim@snu.ac.kr](mailto:byeonghwikim@snu.ac.kr)

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

in [byeonghwi-kim-821909167](https://www.linkedin.com/in/byeonghwi-kim-821909167)

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

## 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: Interactive 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* [↗](#)
- 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

---

- Teaching Assistant @ Korea Telecom (KT)**
- *KT-SNU AI Training Course - Computer Vision* Jul. 2024
- Teaching Assistant @ Seoul National University**
- *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.