

# Sangkyu Lee

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## RESEARCH INTEREST

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**Embodied AI, Omni-modal Model, AI Alignment, Long-term Memory, Continual Learning**

## EDUCATION

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**Yonsei University** Mar. 2023 – Present  
M.S. in Artificial Intelligence (Advisors: [Youngjae Yu](#), [Jongmin Lee](#)) Seoul, Korea

**Yonsei University** Mar. 2021 – Feb. 2023  
B.A. in Applied Statistics, B.S. in Computer Science and Engineering (CGPA: 4.06/4.30) Seoul, Korea

**Hanyang University** Mar. 2017 – Feb. 2021  
Major in Economics and Finance (Transferred, Includes a 2-year mandatory military service) Seoul, Korea

## RESEARCH EXPERIENCE

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**Research Scientist Intern** Sep. 2025 – Present  
Artificial Intelligence and Robotics Institute, KIST (Mentors: [Hwasup Lim](#), [Tackgeun You](#)) Seoul, Korea  
*Researching real-time robotics policy that is capable of replanning based on the environmental feedback*

**Research Assistant** Mar. 2023 – Aug. 2025  
Multimodal Intelligence Research Lab, Yonsei University (PI: [Youngjae Yu](#)) Seoul, Korea  
*Participated as a founding member and took charge of topics related to robotics foundation models*

**Research Scientist Intern** Sep. 2024 – Aug. 2025  
Language Lab, LG AI Research (Mentors: [Honglak Lee](#), [Hosung Song](#), [Janghoon Han](#)) Seoul, Korea  
*Researched for improving Direct Preference Optimization and autoregressive visual generations*

**Technical Lead** Jan. 2024 – May 2024  
World Model for Robotics and Vehicle Control Team, maumAI Seongnam, Korea  
*Led the development project of the world foundation model for robotics and autonomous vehicles*

**Research Scientist Intern** Jul. 2023 – Jan. 2024  
Foundation Research Team, Naver Cloud (Mentors: [Kang Min Yoo](#), [Sungdong Kim](#)) Seongnam, Korea  
*Participated in the alignment of HyperCLOVA X and researched the self-alignment of large language models*

**Undergraduate Research Assistant** Jul. 2022 – Aug. 2022  
Big Data Analytics and Learning Lab, Yonsei University (PI: [Noseong Park](#)) Seoul, Korea  
*Researched Neural Operator and Stratonovich SDE for the reverse-time process of diffusion models*

## PUBLICATIONS

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**Conference Papers**

[C4] KL Penalty Control via Perturbation for Direct Preference Optimization

**Sangkyu Lee**, Janghoon Han, Hosung Song, Stanley Jungkyu Choi, Honglak Lee, Youngjae Yu

*NeurIPS 2025*

[C3] Speaking Beyond Language: A Large-Scale Multimodal Dataset for Learning Nonverbal Cues from Video-Grounded Dialogues

Youngmin Kim\*, Jiwan Chung\*, Jisoo Kim, Sunghyun Lee, **Sangkyu Lee**, Junhyeok Kim, Cheoljong Yang, Youngjae Yu

*ACL 2025*

[C2] MASS: Overcoming Language Bias in Image-Text Matching

Jiwan Chung, Seungwon Lim, **Sangkyu Lee**, Youngjae Yu

*AAAI 2025*

[C1] Aligning Large Language Models by On-Policy Self-Judgment

**Sangkyu Lee**, Sungdong Kim\*, Ashkan Yousefpour, Minjoon Seo, Kang Min Yoo, Youngjae Yu\*

*ACL 2024*

## Preprints & Technical Reports

[P1] SEAL: Entangled White-box Watermarks on Low-Rank Adaptation

Giyeong Oh, Saejin Kim, Woohyun Cho, **Sangkyu Lee**, Jiwan Chung, Dokyung Song, Youngjae Yu

*arXiv*

[T1] HyperCLOVA X Techinal Report

HyperCLOVA X Team (Contributor; **Sangkyu Lee**)

*arXiv*

## HONORS AND AWARDS

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**Partial Scholarship**, Yonsei University (Spring 2023)

**Academic Honors**, Yonsei University (Fall 2021)

## ACADEMIC SERVICES

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**Reviewer**, ICLR (2025)

## TEACHING EXPERIENCE

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**Teaching Assistant**, AAI5012: Advanced Video Processing (Fall 2023)

**Lecture Instructor**, Samsung AI Specialist Course (Jul. 2023)

## EXTRACURRICULAR ACTIVITIES

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**Student Society**: Lead of Data Science Team, YBIGTA, Yonsei University (Mar. 2022 – Feb. 2023)

**Club Activity**: Band Leader (Lead Vocalist), SRGB, Hanyang University (Mar. 2017 – Feb. 2019)

## SKILLS

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**Programming Languages**: Python, C++, Java, R, MATLAB

**Frameworks**: PyTorch, PyTorch Lightning

**Libraries**: Transformers, TRL, Accelerate, DeepSpeed, vLLM, Diffusers, scikit-learn, Optuna

**Math Coursework**: Real Analysis, Mathematical Statistics, Linear Algebra, Numerical Analysis

**Language Proficiency**: Korean (Native), English (Fluent), Japanese (Fluent)