

Seonho Lee

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I specialize in *generative AI* and *perception*, with research on high-dimensional content generation and editing as well as improved perception through **vision-language understanding**. I have worked on large-scale dataset generation, training pipeline design, and developing novel architectures to enhance controllability of real-world AI systems in both academia and industry.

Work Experience

Applied AI Researcher, KRAFTON AI

Mar 2026 - Present
(Seoul, Republic of Korea)

- Working on agentic game development and benchmark construction
- Worked on training and VQA evaluation of Raon-VisionEncoder

ML Engineer Intern, Snap Inc., Generative ML Team (*VideoCraft*)

Jun 2025 - Sep 2025
(Santa Monica, CA, USA)

- Led end-to-end design of a cross-reference dataset preprocessing pipeline for personalized video synthesis, enabling scalable multi-subject conditioning across large-scale video dataset
- Proposed and integrated a multi-subject adapter architecture for *VideoAlchemist 2.0*, improving controllability and subject consistency in personalized text-to-video generation

Publications

*: equal contribution †: corresponding author C: Conference P: Preprint

[C8] Dense Reward for Multi-View 3D Reasoning with Global Maps and Local Views

Jiho Choi*, [Seonho Lee](#)*, Seojeong Park, Hyunjung Shim†

ECCV 2026, arXiv:2606.23557

[C7] Mitigating Perceptual Judgment Bias in Multimodal LLM-as-a-Judge via Perceptual Perturbation and Reward Modeling

Seojeong Park*, Jiho Choi*, Junyong Kang, [Seonho Lee](#), Jaeyo Shin, Hyunjung Shim†

ICML 2026, arXiv:2606.02578

[C6] What “Not” to Detect: Improving Object Detection under Negation via Reasoning and Token Merging

Inha Kang, Youngsun Lim, [Seonho Lee](#), Jiho Choi, Junsuk Choi†, Hyunjung Shim†

ICLR 2026, arXiv:2510.13232

[C5] 3D-Aware Vision-Language Models Fine-Tuning with Geometric Distillation

[Seonho Lee](#)*, Jiho Choi*, Inha Kang, Jiwook Kim, Junsung Park, Hyunjung Shim†

EMNLP 2025 Findings, arXiv:2506.09883

[C4] Fine-Grained Image-Text Correspondence with Cost Aggregation for Open-Vocabulary Part Segmentation

Jiho Choi*, [Seonho Lee](#)*, Seungho Lee, Minhyun Lee, Hyunjung Shim†

CVPR 2025, arXiv:2501.09688

[C3] Scribble-Guided Diffusion for Training-free Text-to-Image Generation

[Seonho Lee](#)*, Jiho Choi*, Seohyun Lim, Jiwook Kim, Hyunjung Shim†

ICIP 2025, arXiv:2409.08026

[C2] DreamCatalyst: Fast and High-Quality 3D Editing via Controlling Editability and Identity Preservation

Jiwook Kim*, [Seonho Lee](#)*, Jaeyo Shin, Jiho Choi, Hyunjung Shim†

ICLR 2025, arXiv:2407.11394

[C1] Understanding Multi-Granularity for Open-Vocabulary Part Segmentation

Jiho Choi*, [Seonho Lee](#)*, Seungho Lee, Minhyun Lee, Hyunjung Shim†

NeurIPS 2024, arXiv:2406.11384

[P1] WaymoQA: A Multi-View Visual Question Answering Dataset for Safety-Critical Reasoning in Autonomous Driving

Seungjun Yu, [Seonho Lee](#), Namho Kim, Jaeyo Shin, Junsung Park, Wonjeong Ryu, Raehyuk Jung, Hyunjung Shim[†]
Under Review, arXiv:2511.20022

Education

KAIST, *Master's degree*, Artificial Intelligence (Advisor: *Prof. Hyunjung Shim*) Mar 2024 – Feb 2026

- GPA: 4.20/4.3
- Research area: Generative AI, Vision-Language Models

Sogang University, *Bachelor's degree*, Computer Science and Engineering Mar 2017 – Feb 2024

- GPA: 4.12/4.3 (*2nd out of 120, Summa Cum Laude*)

Projects

Raon-VisionEncoder, KRAFTON AI 2026 - Present

- Developed a fully-open SigLIP2-class vision encoder with comparable performance
- Integrated the vision encoder into a VLM training pipeline for downstream VQA evaluation and training optimization

VideoAlchemist 2.0, Snap Inc. Jun 2025 - Sep 2025

- Built a multi-subject personalized text-to-video generation model with a cross-reference dataset pipeline and adapter architecture
- Contributed to the dataset generation pipeline and adapter design of AlcheMinT

3D-Aware VLM Finetuning, KAIST w/ Samsung Research Jun 2024 - Jun 2025

- Electronic Device and Method for Operating Thereof and Storage Medium (Korean patent 10-2025-0109574)
- Paper: 3D-Aware Vision-Language Models Fine-Tuning with Geometric Distillation

Honors and Awards

Grand Prize at IPIU 2026 Feb 2026

- Paper: What “Not” to Detect: Improving Object Detection under Negation via Reasoning and Token Merging

Qualcomm Innovation Fellowship Korea 2025 Finalist Oct 2025

- Two papers selected by Qualcomm AI Research (PartCATSeg, 3D-Aware VLM Finetuning)

Korean Presidential Science Scholarship for Graduate Students Jun 2025

- Awarded by the President of Korea (*acceptance rate 5%, 18K USD*)

2nd Place on Open-Vocabulary Part Segmentation Challenge at CVPR 2024 Jun 2024

- 2nd Place both on Track 1 and 2 (4th workshop on Open World Vision at CVPR 2024)

Excellence Award in 2023 POSTECH OIBC Challenge Dec 2023

- 3rd Place (3/120) in AI Competition of Solar Power Generation Forecasting (2K USD)

2022 ICPC Asia Korea Regional Contest Aug 2022

- 48th in Korea, 62nd in Preliminary

Korea National Science and Technology Scholarship Mar 2019 - Dec 2023

- Spring 2019, Fall 2022, Spring 2023, Fall 2023 (*4 Semesters, Total 16K USD*)

Dean's List, Sogang University

- 1%: Spring 2018, Spring 2019, Fall 2022 / 5%: Fall 2018