# Seonho Lee

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## Education

**KAIST**, Graduate of Artificial Intelligence                                    Mar 2024 – Feb 2026
*(expected)*
- Advisor: *Prof.* Hyunjung Shim
- GPA: 4.18/4.3
- Research area: Generative Models, Open-Vocabulary Understanding

**Sogang University**, BS in Computer Science and Engineering          Mar 2017 – Feb 2024
- GPA: 4.12/4.3 ($2^{nd}$ out of 120, *Summa Cum Laude*)

**Sangsan High School**                                                          Mar 2014 - Feb 2017

## Publications

**Fine-Grained Image-Text Correspondence with Cost Aggregation for Open-Vocabulary Part Segmentation**                                      Nov 2024

Jiho Choi*, <u>Seonho Lee</u>*, Seungho Lee, Minhyun Lee, Hyunjung Shim *(\* indicates equal contribution)*

**Under Review**, arXiv:2501.09688

**Scribble-Guided Diffusion for Training-free Text-to-Image Generation**          Sep 2024

<u>Seonho Lee</u>*, Jiho Choi*, Seohyun Lim, Jiwook Kim, Hyunjung Shim *(\* indicates equal contribution)*

**Under Review**, arXiv:2409.08026

**DreamCatalyst: Fast and High-Quality 3D Editing via Controlling Editability and Identity Preservation**                                      Jul 2024

Jiwook Kim*, <u>Seonho Lee</u>*, Jaeyo Shin, Jiho Choi, Hyunjung Shim *(\* indicates equal contribution)*

**ICLR 2025**, arXiv:2407.11394

**Understanding Multi-Granularity for Open-Vocabulary Part Segmentation**          May 2024

Jiho Choi*, <u>Seonho Lee</u>*, Seungho Lee, Minhyun Lee, Hyunjung Shim *(\* indicates equal contribution)*

**NeurIPS 2024**, arXiv:2406.11384

## Experience

**Graduate Student AI Researcher**, CVML Lab, KAIST                      Mar 2024 - Feb 2026
- Researching multi-modal AI for real-world interactions, particularly in open-vocabulary settings
- Investigating generative AI for 3D content creation and editing

**Research Intern**, HVCL, Korea University                              Jul 2022 – Aug 2022
- Developed web-based deep-learning software in analysis of pathology
- Contributed to a project in a start-up affiliated with the laboratory
- Advisor: *Prof.* Won Ki Jeong

**Data Engineer**, Life Planning Lab                                    Dec 2021 – Jan 2022
- Developed back-end platform and managed database
- Created a data preprocessor on AWS and built data pipeline for dashboard

## Projects

**SHrack: Mobile Web Service for Real-time Exercise Count Tracking**　　　　Mar 2023 - Jun 2023
- Web-based real-time video streaming service for accurate exercise count detection
- Developed a pipeline for deep learning using MobileNet and Contextual Prediction Module

**RECJOON: Backjoon Online Judge Problem Solving Recommendation System**　　　　Mar 2022 - Jun 2022
- Recommendation system for Baekjoon Online Judge algorithm problems
- Led a project developing a web application and designed MLOps architectures

**KUVIS (Vience Canvas)**　　　　Jun 2022 - Aug 2022
- Developed a baseline of parallel computing for deep learning
- Designed an architecture of visual AI programming

## Honors and Awards

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

**2022 ICPC Asia Korea Regional Contest**
- $48^{th}$ in Korea, $62^{nd}$ in Preliminary

**Korea National Science and Technology Scholarship**　　　　Mar 2019 - Dec 2023
- Spring 2019, Fall 2022, Spring 2023, Fall 2023 (*4 Semesters*)

**Dean's List, Sogang University**
- 1%: Spring 2018, Spring 2019, Fall 2022
- 5%: Fall 2018

## Teaching Experience

**Basic Computational Engineering Design, CSE2003, Sogang University**　　　　Sep 2019 - Dec 2019
- Teaching Assistant

## Skill Development

**Naver Boostcamp AI Tech 3rd**　　　　Jan 2022 - Jun 2022
- Participated in courses and competitions hosted by Upstage