
EDUCATION

University of Michigan

Aug 2024 - Present

Ph.D. in Computer Science and Engineering (Advisor: Lu Wang)

Seoul National University

Mar 2020 - Feb 2024

B.S. in Computer Science and Engineering

GPA: 4.18/4.3 (cumulative), 4.17/4.3 (major)

Summa cum laude, rank: 1st in the department

Seoul Science High School

Mar 2017 - Feb 2020

The school for gifted students in mathematics and science, teaching college-level math and science

GPA: 4.18/4.3

PUBLICATIONS

Enhancing Multilingual Reasoning in Language Models

- Developing a new dataset that focuses on cultural adaptation, addressing the limitations of direct translation.
- Exploring different rollout methods and loss functions in RL to improve multilingual reasoning.
- Generating synthetic training datasets to improve multilingual reasoning.

Ongoing Project

LiveOIBench: Can Large Language Models Outperform Human Contestants in Informatics Olympiads?

- Implemented self-debugging baselines.

Kaijian Zou, Aaron Xiong, Yunxiang Zhang, Xinliang Frederick Zhang, Yueqi Ren, Jirong Yang, Ayoung Lee, Shitanshu Bhushan, Lu Wang

Submitted to ICLR 2026, Initial avg. score in top $\approx 25\%$

Logit Arithmetic Elicits Long Reasoning Capabilities Without Training

- Ran supervised fine-tuning experiments, with and without LoRA, for distillation baselines.

Yunxiang Zhang, Muhammad Khalifa, Lechen Zhang, Xin Liu, Ayoung Lee, Xinliang Frederick Zhang, Farima Fatahi Bayat, Lu Wang

COLM 2025, The 1st Workshop on Test-time Scaling and Reasoning Models, Submitted to ARR 2025 Oct [paper]

CLASH: Evaluating Language Models on Judging High-Stakes Dilemmas from Multiple Perspectives

- Assessed the ability of language models to respond to dilemmas based on character descriptions as perspectives.
- Analyzed reasoning chains and identified new failure modes in the value-understanding domain.
- Converted a non-verifiable dilemma task into a verifiable format.

Ayoung Lee, Ryan Sungmo Kwon, Peter Railton, Lu Wang

Preprint, Submitted to ICLR 2026, Initial avg. score in top $\approx 20\%$ [paper]

On Consistency Training for Language-Based Image Editing Interface

- Generated training dataset using stable diffusion and YOLOv7 to enforce greater consistency in object-level image edits.

Younghwon Lee, Ayoung Lee*, Yeonjoon Jung, Seung-won Hwang (* denotes equal contribution)*

IJCNLP-AACL 2023, Second Workshop on Natural Language Interfaces (Oral) [paper] [code]

HONORS AND AWARDS

Best Presentation Award, NLP @ Michigan Day	Mar 2025
Kwanjeong Educational Foundation Scholarship	Aug 2024 - Present
Outstanding Student Commendation from the Alumni Association	Feb 2024
Excellent Bachelor's Thesis Presentation Award	Feb 2024
SNU Tomorrow's Engineers Membership	Mar 2022 - Aug 2022
Outstanding Tutor Award	Aug 2021
Presidential Science Scholarship	Mar 2020 - Feb 2024

WORK EXPERIENCE

NAVER Cloud HealthCare AI	Mar 2024 - Jun 2024
<i>Research Intern</i>	<i>Seongnam, South Korea</i>
• Contributed to the curation of an EMR note retrieval dataset using entity linking algorithms	
Language and Data Intelligence Lab	Mar 2023 - Feb 2024
<i>Undergraduate Research Intern (Advisor: Prof. Seung-won Hwang)</i>	<i>Seoul, South Korea</i>
• Participated in improving language-based image editing interface using cycle consistency	
• Published in the IJCNLP-AAACL workshop as a co-first author	
DeepMetrics	Jun 2022 - Jan 2023
<i>Machine Learning Engineering Intern (Advisor: Prof. Hyun Oh Song)</i>	<i>Seoul, South Korea</i>
• Participated in medical data preprocessing & developed algorithms for autonomous ventilator manipulation	
Samsung Device Solutions Memory	Jul 2021 - Aug 2021
<i>Software Intern</i>	<i>Hwaseong, South Korea</i>
• Participated in semiconductor wafer anomaly detection using machine learning algorithms	

TALKS

Injecting Math Reasoning Abilities in Language Models	Jun 2024
<i>@ Deepest, Seoul National University</i>	
Study Abroad Presentation for Students	May 2024
<i>@ Seoul Science High School</i>	

TEACHING

(M1522.000700) Logic Design, Seoul National University	Sep 2021 - Dec 2021
<i>Teaching Assistant (Instructor: Jihong Kim)</i>	<i>Seoul, South Korea</i>
(034.005) Foundation of Physics 1, Seoul National University	Mar 2021 - Aug 2021
<i>Peer Tutor</i>	<i>Seoul, South Korea</i>
(M1522.000700) Logic Design, Seoul National University	Mar 2021 - Aug 2021
<i>Tutor</i>	<i>Seoul, South Korea</i>

SKILLS

Programming	Python, Java (proficient), C, C++, TypeScript (intermediate), PyTorch (proficient), React, Next.js, Django, Tensorflow (intermediate), Git (proficient)
Communication	Korean (native), English (fluent, TOEFL 115/120 with R 29 L 30 W 27 S 29)