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## EDUCATION

<b>University of Michigan</b> <i>Ph.D. in Computer Science and Engineering (Advisor: Lu Wang)</i>	<b>Aug 2024 - Present</b>
<b>Seoul National University</b> <i>B.S. in Computer Science and Engineering</i> <i>GPA: 4.18/4.3 (cumulative), 4.17/4.3 (major)</i> <i>Summa cum laude, rank: 1st in the department</i>	<b>Mar 2020 - Feb 2024</b>
<b>Seoul Science High School</b> <i>The school for gifted students in mathematics and science, teaching college-level math and science</i> <i>GPA: 4.18/4.3</i>	<b>Mar 2017 - Feb 2020</b>

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## WORK EXPERIENCE

<b>NAVER Cloud HealthCare AI</b> <i>Research Intern</i> <ul style="list-style-type: none"><li>Contributed to the curation of an EMR note retrieval dataset using entity linking algorithms</li></ul>	<b>Mar 2024 - Jun 2024</b> <i>Seongnam, South Korea</i>
<b>Language and Data Intelligence Lab</b> <i>Undergraduate Research Intern (Advisor: Prof. Seung-won Hwang)</i> <ul style="list-style-type: none"><li>Participated in improving language-based image editing interface using cycle consistency</li><li>Published in the IJCNLP-AAACL workshop as a co-first author</li></ul>	<b>Mar 2023 - Feb 2024</b> <i>Seoul, South Korea</i>
<b>DeepMetrics</b> <i>Machine Learning Engineering Intern (Advisor: Prof. Hyun Oh Song)</i> <ul style="list-style-type: none"><li>Participated in medical data preprocessing &amp; developed algorithms for autonomous ventilator manipulation</li></ul>	<b>Jun 2022 - Jan 2023</b> <i>Seoul, South Korea</i>
<b>Samsung Device Solutions Memory</b> <i>Software Intern</i> <ul style="list-style-type: none"><li>Participated in semiconductor wafer anomaly detection using machine learning algorithms</li></ul>	<b>Jul 2021 - Aug 2021</b> <i>Hwaseong, South Korea</i>

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## HONORS AND AWARDS

<b>Best Presentation Award, NLP @ Michigan Day</b>	<b>Mar 2025</b>
<b>Kwanjeong Educational Foundation Scholarship</b>	<b>Aug 2024 - Present</b>
<b>Outstanding Student Commendation from the Alumni Association</b>	<b>Feb 2024</b>
<b>Excellent Bachelor's Thesis Presentation Award</b>	<b>Feb 2024</b>
<b>SNU Tomorrow's Engineers Membership</b> <i>Honor Society of Seoul National University College of Engineering</i>	<b>Mar 2022 - Aug 2022</b>
<b>Outstanding Tutor Award</b> <i>Award bestowed upon tutors demonstrating outstanding achievements and exemplary dedication in the peer tutoring program</i>	<b>Aug 2021</b>

**Presidential Science Scholarship**

Mar 2020 - Feb 2024

*Full tuition plus living expenses support for undergraduate students majoring in science and technology***Volunteer Service Silver Certificate**

Dec 2019

*Certificate awarded for over 500 hours of volunteer service***Winter School of the Korean Physics Olympiad**

Jan 2018 - Jan 2018

*Program for International Physics Olympiad (IPhO) candidates sponsored by the Korean Physical Society*PROJECTS

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**WaffleStudio Toy Project**

Dec 2022 - Feb 2023

*Web & App Development Project hosted by Seoul National University*

- Developed a sharable calendar web service using Next.js and Django
- Secured the third position among all the competing participants
- [frontend](#), [backend](#)

**K-Startup Maker Project**

Jul 2020 - Dec 2020

*Maker Project hosted by the Korean Government*

- Awarded 5,000\$ in funding
- Developed a software for "Sensorless Robot Navigation via External Camera Monitoring" as vision team leader
- Used U-Net for driving area detection and DOPE (Deep Object Pose Estimation) for robot position detection
- [code](#)

**International Student Car Competition 2020**

Apr 2020 - Aug 2020

*Electric Car Competition for Students at an International Level, Autonomous Car Category*

- Developed a comprehensive autonomous driving structure
- Implemented real-time parking lot detection by modifying YOLOv3's structure and loss function and accurate lane detection using LaneNet
- [code](#)

PUBLICATIONS

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**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***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***Ayoung Lee, Ryan Sungmo Kwon, Peter Railton, Lu Wang**Preprint, Submitted to ICLR 2026 [\[paper\]](#)*

## On Consistency Training for Language-Based Image Editing Interface

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

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

## TALKS

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### Injecting Math Reasoning Abilities in Language Models

Jun 2024

@ Deepest, Seoul National University

### Study Abroad Presentation for Students

May 2024

@ Seoul Science High School

## TEACHING

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### (M1522.000700) Logic Design, Seoul National University

Sep 2021 - Dec 2021

Teaching Assistant (Instructor: Jihong Kim)

Seoul, South Korea

### (034.005) Foundation of Physics 1, Seoul National University

Mar 2021 - Aug 2021

Peer Tutor

Seoul, South Korea

### (M1522.000700) Logic Design, Seoul National University

Mar 2021 - Aug 2021

Tutor

Seoul, South Korea

## SKILLS

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### 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)