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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>

## WORK EXPERIENCE

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

## 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>

<b>Presidential Science Scholarship</b>	<b>Mar 2020 - Feb 2024</b>
<i>Full tuition plus living expenses support for undergraduate students majoring in science and technology</i>	
<b>Volunteer Service Silver Certificate</b>	<b>Dec 2019</b>
<i>Certificate awarded for over 500 hours of volunteer service</i>	
<b>Winter School of the Korean Physics Olympiad</b>	<b>Jan 2018 - Jan 2018</b>
<i>Program for International Physics Olympiad (IPhO) candidates sponsored by the Korean Physical Society</i>	

## PROJECTS

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<b>WaffleStudio Toy Project</b>	<b>Dec 2022 - Feb 2023</b>
<i>Web &amp; App Development Project hosted by Seoul National University</i>	
<ul style="list-style-type: none"> <li>• Developed a sharable calendar web service using Next.js and Django</li> <li>• Secured the third position among all the competing participants</li> <li>• frontend, backend</li> </ul>	
<b>K-Startup Maker Project</b>	<b>Jul 2020 - Dec 2020</b>
<i>Maker Project hosted by the Korean Government</i>	
<ul style="list-style-type: none"> <li>• Awarded 5,000\$ in funding</li> <li>• Developed a software for "Sensorless Robot Navigation via External Camera Monitoring" as vision team leader</li> <li>• Used U-Net for driving area detection and DOPE (Deep Object Pose Estimation) for robot position detection</li> <li>• <a href="#">code</a></li> </ul>	
<b>International Student Car Competition 2020</b>	<b>Apr 2020 - Aug 2020</b>
<i>Electric Car Competition for Students at an International Level, Autonomous Car Category</i>	
<ul style="list-style-type: none"> <li>• Developed a comprehensive autonomous driving structure</li> <li>• Implemented real-time parking lot detection by modifying YOLOv3's structure and loss function and accurate lane detection using LaneNet</li> <li>• <a href="#">code</a></li> </ul>	

## PUBLICATIONS

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<b>Enhancing Multilingual Reasoning in Language Models</b>	
<ul style="list-style-type: none"> <li>- Developing a new dataset that focuses on cultural adaptation, addressing the limitations of direct translation.</li> <li>- Exploring different rollout methods and loss functions in RL to improve multilingual reasoning.</li> <li>- Generating synthetic training datasets to improve multilingual reasoning.</li> </ul>	
<i>Ongoing Project</i>	
<b>LiveOIBench: Can Large Language Models Outperform Human Contestants in Informatics Olympiads?</b>	
<ul style="list-style-type: none"> <li>- Implemented self-debugging baselines.</li> </ul>	
<i>Kaijian Zou, Aaron Xiong, Yunxiang Zhang, Xinliang Frederick Zhang, Yueqi Ren, Jirong Yang, Ayoung Lee, Shitanshu Bhushan, Lu Wang</i>	
<i>Submitted to ICLR 2026</i>	
<b>Logit Arithmetic Elicits Long Reasoning Capabilities Without Training</b>	
<ul style="list-style-type: none"> <li>- Ran supervised fine-tuning experiments, with and without LoRA, for distillation baselines.</li> </ul>	
<i>Yunxiang Zhang, Muhammad Khalifa, Lechen Zhang, Xin Liu, Ayoung Lee, Xinliang Frederick Zhang, Farima Fatahi Bayat, Lu Wang</i>	
<i>COLM 2025, The 1st Workshop on Test-time Scaling and Reasoning Models, Submitted to ARR 2025 Oct [paper]</i>	
<b>CLASH: Evaluating Language Models on Judging High-Stakes Dilemmas from Multiple Perspectives</b>	
<i>Ayoung Lee, Ryan Sungmo Kwon, Peter Railton, Lu Wang</i>	
<i>Preprint, Submitted to ICLR 2026 [paper]</i>	

## 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

Seoul, South Korea

Teaching Assistant (Instructor: Jihong Kim)

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

Mar 2021 - Aug 2021

Seoul, South Korea

Peer Tutor

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

Mar 2021 - Aug 2021

Seoul, South Korea

Tutor

## 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)