SEUNGPIL LEE

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Personal Statement
Passionate master's student studying artificial intelligence. Interested in Brain-Inspired AI, Natural Language Processing and Reinforcement Learning. Also, maintaining keen interest in interdisciplinary subjects such as Cognitive Science and Science, Technology and Society(STS).

EDUCATION

Gwangju Institute of Science and Technology(GIST) *March 2018 - December 2024*
Undergraduate Overall GPA: 3.66/4.50
Major in Electrical Engineering and Computer Science
Minor in Mathematics
Minor in Literature

UC Berkeley *June 2019 - August 2019*
Berkeley Summer Session Program Overall GPA: 4.00/4.00

ACADEMIC ACTIVITIES

Publications

- **Seungpil Lee***, Woochang Sim*, Donghyeon Shin*, Sanha Hwang, Wongyu Seo, Jiwon Park, Seokki Lee, Sejin Kim and Sundong Kim, "Reasoning Abilities of Large Language Models: In-Depth Analysis on the Abstraction and Reasoning Corpus", **ACM TIST.**
- **Seungpil Lee***, Woochang, Sim*, Donghyeon, Shin*, Sejin, Kim and Sundong, Kim. "Reasoning Abilities of Large Language Models through the Lens of Abstraction and Reasoning (Extended Abstract of the below paper)." NeurIPS Workshop on System-2 Reasoning at Scale, 2024.
- **Seungpil Lee***, Donghyeon Shin*, Klea Lena, Kovacec and Sundong, Kim. "From Generation to Selection: Findings of Converting Analogical Problem-Solving into Multiple-Choice Questions." **EMNLP Findings 2024.**
- Donghyeon Shin, Seungpil Lee, Klea Lena Kovačec and Sundong Kim, "Donghyeon Shin, Seungpil Lee, Klea Lena Kovačec, and Sundong Kim", **IJCAI Workshop 2024.**
- Hosung Lee*, Sejin Kim*, Seungpil Lee, Sanha Hwang, Jihwan Lee, Byung-Jun Lee and Sundong Kim, "ARCLE: The Abstract and Reasoning Corpus Learning Environment for Reinforcement Learning", **CoLLAs, 2024.**
- Seungpil Lee, Jihwan Lee and Sundong Kim, "Evaluating Prior Knowledge of ARC Using World Models", **Korea Software Congress, 2023.**
- Jihwan Lee, Seungpil Lee, Sejin Kim and Sundong Kim, "Extracting the core knowledge of ARC with the World Model", **Korea Software Congress, 2023.**
- Donghyeon Shin, Sanha Hwang, Seokki Lee, Yunho Kim, Seungpil Lee and Sundong Kim, "MC-LARC Benchmark to Measure LLM Reasoning Capability", **Korea Software Congress, 2023.**

Projects

- **Software Engineering and Project**: Made a anonymous community system, which censors toxic comments automatically
- **Artificial Intelligence**: Developed a model to identify the actions carried out by a person given a set of observations(acceleration and gyro on x, y, z axis each with 2.56 second window) of itself and the surrounding environment

SKILLS

Computer Languages	C, C++, Java, JavaScript, Python
Software & Tools	LaTeX, Spring, Spring Boot
Language	Korean(Native Language), English(Intermediate)

EXPERIENCE

DataScience Lab in GIST *September 2023 - present*
Undergraduate Internship, Master's Degree

· Tried to solve Abstraction and Reasoning Corpus (ARC) benchmark using World Model and Meta Reinforcement Learning

Development Team in Korea Navy *January 2022 - September 2023*

· Developed App and Web service for Korean Navy, mainly as back-end developer

BioComputing Lab in GIST June 2020 - January 2021
Undergraduate Internship

· Tried to develop new Spiking Neural Network method with synthetic gradient

AWARD & FUNDING

National Research Foundation of Korea Funding, NRF *September 2025 - September 2026*

· Funding offered to outstanding master's students for conducting research projects

Korean Government Scholarships, GIST College *March 2018 - August 2024*

· Scholarship awarded to students studying in GIST

Scholarship for Summer Session Abroad *June 2019 - August 2019*

· Scholarship awarded to students studying abroad during a summer session

Navy AI Competition *June 2023 - August 2023*

· Awarded drone object detecting competition hosted by Korean Navy

K-StartUp finals *March 2023 - November 2023*

· Advanced to the finals of Korean largest start-up contest, 'K-StartUp', as ML researcher and back-end developer

EXTRA-CURRICULAR

AGIST August 2020 - January 2021
Deep Learning Study Group

· Listened to presentations about various machine learning algorithms including explainable AI and Brain-inspired AI

· Prepared presentations of Spiking Neural Network(SNN) with Spike-Timing-Dependent Plasticity(STDP) learning