Hyunseok Lee

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Google Scholar GitHub

Research Interests

My research interests lie in building intelligence that is self-aware and safe. To this end, I focus on developing Large Language Models (LLMs) that can reason, make decisions (i.e., exhibit agentic behaviors), and ensure safety. I am also broadly interested in the continual pretraining of LLMs and their multilingual capabilities.

Keywords: LLM, LLM Reasoning, LLM-based Agents, LLM Safety

Education

Ph.D. in Artificial Intelligence — Mar. 2024 - Present
Korea Advanced Institute of Science and Technology (KAIST)
Advisor: **Jinwoo Shin**

B.S. in Electrical Engineering and Computer Science (double) — Mar. 2018 - Feb. 2024
Korea Advanced Institute of Science and Technology (KAIST)

Work Experience

Microsoft Research Asia, Research Intern — Jul. 2025 - Present
with **Soheil Abbasloo** — Beijing, CN
- Topic: LLM reasoning, Reinforcement Learning

NAVER Cloud, Research Intern — Feb. 2025 - Jun. 2025
with **Kang Min Yoo** — Seongnam, KR
- Topic: LLM reasoning, LLM Agents, Visual LM (VLM)

Publications

* denotes equal contribution

Preprints (available upon request)

[P1] ReGUIDE: Data Efficient GUI Grounding via Spatial Reasoning and Search
Hyunseok Lee, Jeonghoon Kim, Beomjun Kim, Jihoon Tack, Chansong Jo, Jaehong Lee, Cheonbok Park, Sookyo In, Jinwoo Shin, Kang Min Yoo

Conferences

[C2] ReVISE: Learning to Refine at Test-Time via Intrinsic Self-Verification
Hyunseok Lee*, Seunghyuk Oh*, Jaehyung Kim, Jinwoo Shin, Jihoon Tack
ICML 2025

[C1] ReMoDetect: Reward Models Recognize Aligned LLM's Generations
Hyunseok Lee*, Jihoon Tack*, Jinwoo Shin
NeurIPS 2024
Qualcomm Innovation Fellowship

Honors

Qualcomm Innovation Fellowship Korea 2024

Invited Talks

"Large Scale LLM Training and Cloud Computing Usage" — Dec. 2024
SKT Enterprise AIX CON Online (remote)

"ReMoDetect: Reward Models Recognize Aligned LLM's Generations" — Nov. 2024
Max Planck Institute for Security and Privacy (remote)

Industrial Project

Korean Multilingual LLM Training for Thesis Searching Service Mar. 2024 - Dec. 2024

- LLM project with `Nable Communications`, the web service development company. The system will be deployed at the company's thesis searching service.
- Developed a multilingual Korean LLM continually trained from Llama-3.1-8B (`Korean LLM for Thesis`)
- Applicated core LLM techniques in the system: (i) multilingual continual pretraining by entangling first language, (ii) data synthesize for thesis data to pretrain and post-train, and (iii) RAG-specific training.

Academic Activities

Conference Revise: NeurIPS

Workshop Reviewer: Reasoning and Planning for LLMs@ICLR

Teaching Assistant, "CS101: Introduction to Programming", KAIST Spring & Fall 2023

Tech. Skills

Programming: Python, C
Machine Learning: PyTorch, TensorFlow, huggingface transformers, deepspeed

Software

Open Source: PyTorch implementation and model

- `Korean LLM for Thesis Search`
- `https://github.com/hyunseoklee-ai/ReMoDetect` [C1]

Reference

Jinwoo Shin, Professor at KAIST
Contact: `jinwoos@kaist.ac.kr`

Kangmin Yu, Research Lead at Naver Cloud
Contact: `kangmin.yoo@navercorp.com`

Soheil Abbasloo, Senior Researcher at Microsoft Research
Contact: `soheil.abbasloo@microsoft.com`

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