Sangkyu Lee

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RESEARCH INTEREST

Multimodal Models, Embodied Agents, AI Alignment, Long-context Modeling, Continual Learning

EDUCATION

Yonsei University

Mar. 2023 – Present

M.S. in Artificial Intelligence (Multimodal Intelligence Research Lab, Advisor: Youngjae Yu)

Seoul, Korea

Yonsei University

Mar. 2021 – Feb. 2023

B.A. in Applied Statistics, B.S. in Computer Science (Cumulative GPA: 4.06/4.3)

Seoul, Korea

Hanyang University
Mar. 2017 – Feb. 2021

Major in Economics (Transferred, Includes a 2-Year Mandatory Military Service)

Seoul, Korea

Professional Experience

Research Intern Sep. 2024 – Present

Language Lab, LG AI Research

Seoul, Korea

- Researching adaptive length tokenization of visual modality for efficient autoregressive representations
- Investigating self-improvement of language models that do not require additional training of self-assessment

Technical Lead Jan. 2024 – May 2024

 $World\ Model\ for\ Robotics\ and\ Vehicle\ Control\ Team,\ maum AI$

Seongnam, Korea

- Led the development project of a world model for robotics agents and autonomous vehicles
- Researched visual tokenizers aligned with text representations for fast adaptation of language models

Research Intern Jul. 2023 – Jan. 2024

Foundation Research Team, Naver Cloud

Seongnam, Korea

- Participated in the alignment of HyperCLOVA X, a large language model specialized in Korean
- Researched self-improvement of language models through LLM-as-a-judge

Undergraduate Intern

Jul. 2022 – Aug. 2022

Big Data Analytics and Learning Lab, Yonsei University (Advisor: Noseong Park)

Seoul, Korea

- \bullet Researched Neural Operators for the vision models to achieve resolution-free generative models
- Investigated Stratonovich SDE for accelerating the reverse-time process of diffusion models

Publications

SEAL: Entangled White-box Watermarks on Low-Rank Adaptation

Under Review

Giyeong Oh, Saejin Kim, Woohyun Cho, Sangkyu Lee, Jiwan Chung, Dokyung Song, Youngjae Yu

MASS: Overcoming Language Bias in Image-Text Matching

Under Review

Jiwan Chung, Seungwon Lim, Sangkyu Lee, Youngjae Yu

HyperCLOVA X Techinal Report

 $\underline{\operatorname{arXiv}}$

Kang Min Yoo, Jaegeun Han, Sookyo In, Heewon Jeon, Jisu Jeong, Jaewook Kang, Hyunwook Kim, et al.

Aligning Large Language Models by On-Policy Self-Judgment

ACL 2024

Sangkyu Lee, Sungdong Kim[†], Ashkan Yousefpour, Minjoon Seo, Kang Min Yoo, Youngjae Yu[†]

ACADEMIC ACTIVITIES

Reviewer, ICLR 2025 (Sep. 2024)

Teaching Assistant, AAI5012: Advanced Video Processing (Sep. 2023 – Dec. 2023)

Lecture Instructor, Samsung AI Specialist Course (Jul. 2023)

Honors and Awards

Honors, Yonsei University (Jan. 2022)