JAEKYEOM KIM

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RESEARCH INTERESTS

LLM-based agents for decision making in real-world tasks by leveraging large-scale demonstration datasets and prior knowledge in LLMs.

EDUCATION

Seoul National University *Mar. 2018 - Aug. 2023*
Integrated MS/PhD in Computer Science and Engineering
Vision & Learning Lab (Advisor: Prof. Gunhee Kim and Prof. Hyun Oh Song)
Dissertation: Generalizable Agents with Improved Abstractions and Transfer

Korea Advanced Institute of Science and Technology *Feb. 2010 - Jun. 2017*
Bachelor of Science in Computer Science GPA (Overall): 4.06/4.30
Graduated *summa cum laude* GPA (Major): 4.21/4.30

WORK EXPERIENCE

LG AI Research, Ann Arbor *Aug. 2023 - Present*
Researcher

- Working on LLM-based agents for decision making in real-world tasks, exploiting demonstration datasets and prior knowledge in LLMs
- Manager: Prof. Honglak Lee

ESTsoft, Seoul (Alternative Military Service) *Apr. 2013 - May 2016*
Senior Software Engineer

- Developed the dual-engine web browser based on Chromium, a large-scale open source project that powers Google Chrome and more

Google, Seoul *Jun. 2012 - Sep. 2012*
Software Engineering Intern

- Worked on processing raw text data to generate formalized entries and reconciling them with existing entries, as part of the Knowledge Graph project

PUBLICATIONS

(*equal contribution)

Constrained GPI for Zero-Shot Transfer in Reinforcement Learning

Jaekyeom Kim, Seohong Park, Gunhee Kim

- **NeurIPS 2022**

Lipschitz-constrained Unsupervised Skill Discovery

Seohong Park, Jongwook Choi*, **Jaekyeom Kim***, Honglak Lee, Gunhee Kim

- **ICLR 2022**

Time Discretization-Invariant Safe Action Repetition for Policy Gradient Methods
Seohong Park, **Jaekyeom Kim**, Gunhee Kim

· **NeurIPS 2021**

Unsupervised Skill Discovery with Bottleneck Option Learning
Jaekyeom Kim*, Seohong Park*, Gunhee Kim

· **ICML 2021**

Drop-Bottleneck: Learning Discrete Compressed Representation for Noise-Robust Exploration
Jaekyeom Kim, Minjung Kim, Dongyeon Woo, Gunhee Kim

· **ICLR 2021**

Model-Agnostic Boundary-Adversarial Sampling for Test-Time Generalization in Few-Shot Learning
Jaekyeom Kim, Hyoungseok Kim, Gunhee Kim

· **ECCV 2020 (Oral: 104/5025 ≈ 2%)**

EMI: Exploration with Mutual Information
Hyoungseok Kim*, **Jaekyeom Kim***, Yeonwoo Jeong, Sergey Levine, Hyun Oh Song

· **ICML 2019 (Long talk: 158/3424 ≈ 4.6%)**

HONORS & AWARDS

Best PhD Dissertation Award *Aug. 2023*
Dept. of Computer Science and Engineering, Seoul National University

Star Student Researcher Award *Feb. 2023*
Brain Korea (BK21) FOUR Intelligence Computing, Seoul National University

Youlchon AI Star Fellowship *Jul. 2022*
Youlchon Foundation

Naver PhD Fellowship *Dec. 2021*
Naver

Google PhD Fellowship *Sep. 2021*
Google

· Area: Machine Learning

Samsung Humantech Paper Award *Feb. 2021*
Samsung Electronics

· Silver Prize in Signal Processing, award for research work

Qualcomm Innovation Fellowship Korea *Dec. 2020*
Qualcomm AI Research

· Award for research work

On-Dream Outstanding Scholar Award *Dec. 2020*
Hyundai Motor Chung Mong-Koo Foundation

On-Dream Future Talent Graduate Scholarship *Jul. 2020 - Jul. 2021*
Hyundai Motor Chung Mong-Koo Foundation

· Full-tuition and additional scholarships for graduate study

Kwanjeong Domestic Scholarship *Apr. 2018 - Mar. 2020*
Kwanjeong Educational Foundation

· Full-tuition and additional scholarships for 2 years

Summa Cum Laude Honor *Feb. 2018*
Korea Advanced Institute of Science and Technology

National Presidential Science Scholarship *Feb. 2010 - Jun. 2017*
Korea Student Aid Foundation

· Full-tuition and additional scholarships for undergraduate study

KAIST Convergence AMP Scholarship *Oct. 2016*
Korea Advanced Institute of Science and Technology

· Merit-based scholarship awarded to 5 recipients

ACADEMIC ACTIVITIES

Conference Reviewer

· ICML (2021, 2022, 2023), NeurIPS (2021, 2022, 2023), ICLR (2022, 2023, 2024)

Teaching Assistant at Seoul National University

· Probabilistic Graphical Models (M1522.001300), Spring, 2022
· Statistical Foundations for A.I. and Machine Learning (M2480.000500), Fall, 2021
· Theory and Lab of IoT, AI, and Big Data (M2177.004900), Spring, 2021
· Probabilistic Graphical Models (M1522.001300), Spring, 2020
· Introduction to Deep Learning (M2177.004300), Spring, 2019
· Engineering Mathematics 2 (033.015), Fall, 2018
· Introduction to Deep Learning (M2177.004300), Spring, 2018