

JAEKYEOM KIM

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RESEARCH INTERESTS

Deep reinforcement learning: abstraction of behaviors at scale and improving learned behaviors' reusability on and robustness to new tasks or data, including (a) discovery or learning of reusable and interpretable skills, (b) few- or zero-shot transfer, and (c) distilling task-relevant information.

EDUCATION

Seoul National University

Mar. 2018 - Present

Integrated MS/PhD in Computer Science and Engineering (Expected graduation: 2023)

Vision & Learning Lab (Advisor: Prof. Gunhee Kim and Prof. Hyun Oh Song)

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

PUBLICATIONS

(*equal contribution)

Constrained GPI for Zero-Shot Transfer in Reinforcement Learning

Jaekyeom Kim, Seohong Park, Gunhee Kim

· **NeurIPS 2022** (to appear)

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, Hyungseok Kim, Gunhee Kim

· **ECCV 2020 (Oral: 104/5025 \approx 2%)**

EMI: Exploration with Mutual Information

Hyoungeok Kim*, **Jaekyeom Kim***, Yeonwoo Jeong, Sergey Levine, Hyun Oh Song

- **ICML 2019 (Long talk: 158/3424 \approx 4.6%)**

HONORS & AWARDS

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), NeurIPS (2021, 2022), ICLR (2022, 2023)

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

WORK EXPERIENCE

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