

# JAEKYEOM KIM

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## RESEARCH INTERESTS

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Deep reinforcement learning: discovery and abstraction of behaviors at scale and generalization of learned behaviors to new tasks or domains.

## EDUCATION

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### Seoul National University

*Mar. 2018 - Present*

Integrated MS/PhD in Computer Science and Engineering (Expected graduation: Aug. 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  
Graduated *summa cum laude*

GPA (Overall): 4.06/4.30  
GPA (Major): 4.21/4.30

## PUBLICATIONS

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(\*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**, Hyungseok Kim, Gunhee Kim

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

EMI: Exploration with Mutual Information

Hyungseok Kim\*, **Jaekyeom Kim\***, Yeonwoo Jeong, Sergey Levine, Hyun Oh Song

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

## HONORS & AWARDS

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|--|------------------------------|
| <b>Star Student Researcher Award</b><br><i>Brain Korea (BK21) FOUR Intelligence Computing, Seoul National University</i> | <i>Feb. 2023</i>             |
| <b>Youlchon AI Star Fellowship</b><br><i>Youlchon Foundation</i>   | <i>Jul. 2022</i>             |
| <b>Naver PhD Fellowship</b><br><i>Naver</i>  | <i>Dec. 2021</i>             |
| <b>Google PhD Fellowship</b><br><i>Google</i>  | <i>Sep. 2021</i>             |
| · Area: Machine Learning   |                              |
| <b>Samsung Humantech Paper Award</b><br><i>Samsung Electronics</i>   | <i>Feb. 2021</i>             |
| · Silver Prize in Signal Processing, award for research work   |                              |
| <b>Qualcomm Innovation Fellowship Korea</b><br><i>Qualcomm AI Research</i>   | <i>Dec. 2020</i>             |
| · Award for research work  |                              |
| <b>On-Dream Outstanding Scholar Award</b><br><i>Hyundai Motor Chung Mong-Koo Foundation</i>                              | <i>Dec. 2020</i>             |
| <b>On-Dream Future Talent Graduate Scholarship</b><br><i>Hyundai Motor Chung Mong-Koo Foundation</i>                     | <i>Jul. 2020 - Jul. 2021</i> |
| · Full-tuition and additional scholarships for graduate study  |                              |
| <b>Kwanjeong Domestic Scholarship</b><br><i>Kwanjeong Educational Foundation</i>   | <i>Apr. 2018 - Mar. 2020</i> |
| · Full-tuition and additional scholarships for 2 years   |                              |
| <b>Summa Cum Laude Honor</b><br><i>Korea Advanced Institute of Science and Technology</i>                                | <i>Feb. 2018</i>             |
| <b>National Presidential Science Scholarship</b><br><i>Korea Student Aid Foundation</i>                                  | <i>Feb. 2010 - Jun. 2017</i> |
| · Full-tuition and additional scholarships for undergraduate study   |                              |
| <b>KAIST Convergence AMP Scholarship</b><br><i>Korea Advanced Institute of Science and Technology</i>                    | <i>Oct. 2016</i>             |
| · Merit-based scholarship awarded to 5 recipients  |                              |

## ACADEMIC ACTIVITIES

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- Conference Reviewer**
- ICML (2021, 2022, 2023), NeurIPS (2021, 2022, 2023), 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

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### **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