

# JAEKYEOM KIM

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## RESEARCH INTERESTS

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- Better robustness and adaptability to new data or tasks, largely in deep reinforcement learning (RL)
- Representation learning and information-theoretic approaches in deep RL

## EDUCATION

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### Seoul National University

*Mar. 2018 - Present*

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

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(\*equal contribution)

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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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

**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

**Code Sprint 2015**

*Jul. 2015*

*SK Planet*

- **R2 - 3rd Place:** Made predictions on customers' future VOD purchases given their past purchase lists
- **R1 - Special Award:** Wrote algorithms for Robocode agents
- Only competitor who won prizes in both of the competitions

**ITCSC-INC 2012 Winter School**

*Jan. 2012*

*Chinese University of Hong Kong*

- One of 2 Korean and 48 other Asian students chosen and invited

## ACADEMIC ACTIVITIES

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**Conference Reviewer**

- ICML (2021), NeurIPS (2021), ICLR (2022)

**Teaching Assistant at Seoul National University**

- 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