

# JAEKYEOM KIM

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## RESEARCH INTERESTS

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Building capable AI agents for decision-making in challenging, real-world tasks, with language and multimodal models and reinforcement learning.

## WORK EXPERIENCE

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**LG AI Research, Ann Arbor**

*Aug. 2023 - Present*

*Researcher*

- Working on language and multimodal agents for decision making in challenging, real-world tasks
- 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

## EDUCATION

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**Seoul National University**

*Mar. 2018 - Aug. 2023*

Integrated MS/PhD in Computer Science and Engineering

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

Dissertation: [Generalizable Agents with Improved Abstractions and Transfer](#)

Committee: Profs. Sungjoo Yoo, Gunhee Kim, Hyun Oh Song, Joonseok Lee, and Kimin Lee

**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)

1. Do Not Trust Licenses You See—Dataset Compliance Requires Massive-Scale AI-Powered Lifecycle Tracing  
**Jaekyeom Kim\***, Sungryull Sohn\*, Gerrard Jeongwon Jo, Jihoon Choi, Kyunghoon Bae, Hwayoung Lee, Yongmin Park, Honglak Lee  
[Preprint](#)
2. AutoGuide: Automated Generation and Selection of Context-Aware Guidelines for Large Language Model Agents  
Yao Fu\*, Dong-Ki Kim\*, **Jaekyeom Kim**, Sungryull Sohn, Lajanugen Logeswaran, Kyunghoon Bae, Honglak Lee  
**NeurIPS 2024** ([Proceeding](#))

3. Auto-Intent: Automated Intent Discovery and Self-Exploration for Large Language Model Web Agents  
**Jaekyeom Kim**, Dong-Ki Kim, Lajanugen Logeswaran, Sungryull Sohn, Honglak Lee  
**EMNLP 2024 Findings** ([Proceeding](#))
4. SkillAct: Using Skill Abstractions Improves LLM Agents  
Anthony Zhe Liu, Jongwook Choi, Sungryull Sohn, Yao Fu, **Jaekyeom Kim**, Dong-Ki Kim, Xinhe Wang, Jaewon Yoo, Honglak Lee  
**ICML 2024 Workshop on LLMs and Cognition** ([Accepted Papers](#))
5. Small Language Models Need Strong Verifiers to Self-Correct Reasoning  
Yunxiang Zhang, Muhammad Khalifa, Lajanugen Logeswaran, **Jaekyeom Kim**, Moontae Lee, Honglak Lee, Lu Wang  
**ACL 2024 Findings** ([Proceeding](#))
6. Constrained GPI for Zero-Shot Transfer in Reinforcement Learning  
**Jaekyeom Kim**, Seohong Park, Gunhee Kim  
**NeurIPS 2022** ([Proceeding](#))
7. Lipschitz-constrained Unsupervised Skill Discovery  
Seohong Park, Jongwook Choi\*, **Jaekyeom Kim\***, Honglak Lee, Gunhee Kim  
**ICLR 2022** ([Proceeding](#))
8. Time Discretization-Invariant Safe Action Repetition for Policy Gradient Methods  
Seohong Park, **Jaekyeom Kim**, Gunhee Kim  
**NeurIPS 2021** ([Proceeding](#))
9. Unsupervised Skill Discovery with Bottleneck Option Learning  
**Jaekyeom Kim\***, Seohong Park\*, Gunhee Kim  
**ICML 2021** ([Proceeding](#))
10. Drop-Bottleneck: Learning Discrete Compressed Representation for Noise-Robust Exploration  
**Jaekyeom Kim**, Minjung Kim, Dongyeon Woo, Gunhee Kim  
**ICLR 2021** ([Proceeding](#))
11. Model-Agnostic Boundary-Adversarial Sampling for Test-Time Generalization in Few-Shot Learning  
**Jaekyeom Kim**, Hyoungeok Kim, Gunhee Kim  
**ECCV 2020 (Oral: 104/5025  $\approx$  2%)** ([Proceeding](#))
12. EMI: Exploration with Mutual Information  
Hyoungseok Kim\*, **Jaekyeom Kim\***, Yeonwoo Jeong, Sergey Levine, Hyun Oh Song  
**ICML 2019 (Long talk: 158/3424  $\approx$  4.6%)** ([Proceeding](#))

## HONORS & AWARDS

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<b>PhD Dissertation Award</b> <i>Dept. of Computer Science and Engineering, Seoul National University</i>	<i>Aug. 2023</i>
<b>Star Student Researcher Award</b> <i>Brain Korea (BK21) FOUR Intelligence Computing, Seoul National University</i>	<i>Feb. 2023</i>
<b>Youlchon AI Star Fellowship</b> <i>Youlchon Foundation</i>	<i>Jul. 2022</i>
<b>Naver PhD Fellowship</b> <i>Naver</i>	<i>Dec. 2021</i>
<b>Google PhD Fellowship</b> <i>Google</i>	<i>Sep. 2021</i>
· Area: Machine Learning	
<b>Samsung Humantech Paper Award</b> <i>Samsung Electronics</i>	<i>Feb. 2021</i>
· Silver Prize in Signal Processing, award for research work	
<b>Qualcomm Innovation Fellowship Korea</b> <i>Qualcomm AI Research</i>	<i>Dec. 2020</i>
· Award for research work	
<b>On-Dream Outstanding Scholar Award</b> <i>Hyundai Motor Chung Mong-Koo Foundation</i>	<i>Dec. 2020</i>
<b>On-Dream Future Talent Graduate Scholarship</b> <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> <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> <i>Korea Advanced Institute of Science and Technology</i>	<i>Feb. 2018</i>
<b>National Presidential Science Scholarship</b> <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> <i>Korea Advanced Institute of Science and Technology</i>	<i>Oct. 2016</i>
· Merit-based scholarship awarded to 5 recipients	

## ACADEMIC SERVICE AND ACTIVITIES

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### Conference Reviewer

- ICML (2021, 2022, 2023, 2024, 2025)
- NeurIPS (2021, 2022, 2023, 2024, 2025)
- ICLR (2022, 2023, 2024, 2025)
- ARR (2025)
- Workshops: Behavioral ML (NeurIPS 2024), Re-Align (ICLR 2025)

### Teaching Assistant

- 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