

Changyeon Kim

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Research Interest

My research enables robotic agents to keep improving from their real-world deployment. To this end, I develop scalable and reliable reinforcement learning (RL) for large vision-language-action (VLA) policies—offline value learning over action sequences [C8], rollout-free validation for safely re-deploying updated policies [P3], and lifelong adaptation that resists forgetting [C11, P4]—building on earlier reward learning that captures human intent from human feedback [C2] and vision-language foundation models [C3, C4].

Education

Korea Advanced Institute of Science and Technology

M.S. + PH.D. IN ARTIFICIAL INTELLIGENCE

Advisor: Kimin Lee and Jinwoo Shin

Daejeon, S.Korea

Feb. 2022 - Oct. 2026 (Expected)

Korea Advanced Institute of Science and Technology

B.SC. IN COMPUTER SCIENCE AND MATHEMATICS (MINOR)

Daejeon, S.Korea

Mar. 2016 - Feb. 2021

Work Experience

NVIDIA Seattle Robotics Lab

RESEARCH INTERN WITH YIJIE GUO AND YASHRAJ NARANG

- Developing continual RL framework on top of VLAs working for real-world complex assemblies

Seattle, WA, USA

May. 2026 - Sep. 2026 (Expected)

Visiting PhD Student @ The University of Texas at Austin

WITH YUKE ZHU

- Developed an offline RL framework [C8] with action sequences suited for training with large-scale VLAs.
- Investigated effect of large-scale VLAs in continual learning paradigms [C11].
- Designed VLM-based reward framework encouraging human-aligned behaviors without human reward engineering.

Austin, TX, USA

Sep. 2024 - Jul. 2025

External Collaborator

WITH JOSEPH J. LIM (KAIST)

- Developed a visual reward learning algorithm [C4] for solving complex long-horizon robotic manipulations.

Remote

Mar. 2024 - June. 2024

External Collaborator

WITH LISA LEE (GOOGLE DEEPMIND)

- Developed an imitation learning algorithm [C3] using multimodal representations for improving generalization ability in unseen variations.

Remote

Apr. 2023 - Aug. 2023

External Collaborator

WITH HONGLAK LEE (UNIVERSITY OF MICHIGAN)

- Developed an imitation learning algorithm [C3] using multimodal representations for improving generalization ability in unseen variations.
- Developed a reinforcement learning algorithm [W1] for improving generalization ability in varying dynamics.
- Developed a preference-based reinforcement learning algorithm [C2] for modeling non-Markovian human preferences.
- Developed a visual reward learning algorithm [C4] for solving complex long-horizon robotic manipulations.

Remote

Mar. 2022 - June. 2024

Machine Learning Engineer

KAKAO, RECOMMENDATION TEAM

- Developed ML platform for recommendation system.
- Implemented data pipeline from user feedback to refined user-item interaction matrix data.

Seongnam, S.Korea

Dec. 2020 - Feb. 2022

Publications

C: Conference, W: Workshop, P: Preprint, *: Equal contribution

[P4] Continual Off-Policy Reinforcement Learning for Robot Foundation Models

CHANGYEON KIM, YIJIE GUO, KIMIN LEE, YASHRAJ NARANG

- Preparing for ICRA 2027.

[P3] SurVAL: Rollout-Free Survival Validation for Robot Policies

CHANGYEON KIM, YEKYUNG NAH, KIMIN LEE

- Preparing for ICRA 2027.

[C11] Pretrained Vision-Language-Action Models are Surprisingly Resistant to Forgetting in Continual Learning

HUIHAN LIU, **CHANGYEON KIM**, BO LIU, MINGHUAN LIU, YUKE ZHU

- International Conference on Machine Learning (ICML), 2026,
- Designated as **oral paper** (168 / 23918 = 0.7%)

Seoul, South Korea

Jul, 2026.

[C10] Contrastive Representation Regularization for Vision-Language-Action Models

TAEYOUNG KIM, JIMIN LEE, MYUNGKYU KOO, DONGYOUNG KIM, KYUNGMIN LEE, **CHANGYEON KIM**, YOUNGGYO SEO, JINWOO SHIN

- International Conference on Machine Learning (ICML), 2026.

Seoul, South Korea

Jul, 2026.

[C9] Learning Multi-View Spatial Reasoning from Cross-View Relations

SUCHAE JEONG, JAEHWI SONG, HAEONE LEE, HANNA KIM, JIAN KIM, DONGJUN LEE, DONG KYU SHIN, **CHANGYEON KIM**, DONGYOON HAHM, WOOGYEOL JIN, JUHEON CHOI, KIMIN LEE

- The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026.

Denver, CO, USA

Jun, 2026.

[C8] DEAS: DETached value learning with Action Sequence for Scalable Offline RL

CHANGYEON KIM, HAEONE LEE, YOUNGGYO SEO, KIMIN LEE, YUKE ZHU

- International Conference on Learning Representations (ICLR), 2026.

Rio de Janeiro, Brazil

Apr, 2026.

[C7] Verifier-free Test-Time Sampling for Vision Language Action Models

SUHYEOK JANG, DONGYOUNG KIM, **CHANGYEON KIM**, YOUNGSUK KIM, JINWOO SHIN

- International Conference on Learning Representations (ICLR), 2026.

Rio de Janeiro, Brazil

Apr, 2026.

[C6] HAMLET: Switch Your Vision-Language-Action Model into a History-Aware Policy

MYUNGKYU KOO, DAEWON CHOI, TAEOYOUNG KIM, KYUNGMIN LEE, **CHANGYEON KIM**, YOUNGGYO SEO, JINWOO SHIN

- International Conference on Learning Representations (ICLR), 2026.

Rio de Janeiro, Brazil

Apr, 2026.

[C5] B-MoCA: Benchmarking Mobile Device Control Agents across Diverse Configurations

JUYONG LEE, TAYWON MIN, MINYONG AHN, DONGYOON HAHM, HAEONE LEE, **CHANGYEON KIM**, KIMIN LEE

- Conference on Lifelong Learning Agents (CoLLAs), 2025.
- ICLR 2024 Workshop on Generative Models for Decision Making (GenAI4DM), **Spotlight**

Philadelphia, PA, USA

Aug, 2025.

[C4] Subtask-Aware Visual Reward Learning from Segmented Demonstrations

CHANGYEON KIM, MINHO HEO, DOOHYUN LEE, JINWOO SHIN, HONGLAK LEE, KIMIN LEE, JOSEPH J LIM

- International Conference on Learning Representations (ICLR), 2025.

Singapore, Singapore

Apr, 2025.

[C3] Guide Your Agent with Adaptive Multimodal Rewards

CHANGYEON KIM, YOUNGGYO SEO, HAO LIU, LISA LEE, JINWOO SHIN, HONGLAK LEE, KIMIN LEE

- Conference on Neural Information Processing Systems (NeurIPS), 2023.
- **Finalist**, Qualcomm Innovation Fellowship Korea 2024

New Orleans, LA, USA

Dec, 2023.

[C2] Preference Transformer: Modeling Human Preferences using Transformers for RL

CHANGYEON KIM*, JONGJIN PARK*, JINWOO SHIN, HONGLAK LEE, PIETER ABBEEL, KIMIN LEE

- International Conference on Learning Representations (ICLR), 2023.

Kigali, Rwanda

May, 2023.

[W1] Dynamics-Augmented Decision Transformer for Offline Dynamics Generalization

CHANGYEON KIM*, JUNSU KIM*, YOUNGGYO SEO, KIMIN LEE, HONGLAK LEE, JINWOO SHIN

- NeurIPS 2022 Workshop on Offline Reinforcement Learning (NeurIPSW)

New Orleans, LA, USA

Nov, 2022.

[C1] Collecting the Public Perception of AI and Robot Rights

GABRIEL LIMA, **CHANGYEON KIM**, SEUNGHO RYU, CHIHOUNG JEON, MEEYOUNG CHA

- Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2020.

Online

Oct, 2020.

[P2] Trust Region Q Adjoint Matching

YONGHOON DONG, KYUNGMIN LEE, **CHANGYEON KIM**, JAEHYUK KIM, JINWOO SHIN

- ArXiv Preprint.

[P1] MOI-Mixer: Improving MLP-Mixer with Multi Order Interactions in Sequential Recommendation

HOJOON LEE, DONGYOON HWANG, SUNGHWAN HONG, **CHANGYEON KIM**, SEUNGRYONG KIM, JAEGUL CHOO

- ArXiv Preprint.

Honors & Awards

2026	Silver Reviewer Award , International Conference on Machine Learning	Seoul, S.Korea
2025	Notable Reviewer , International Conference on Learning Representations	Singapore
2024	Finalist , Qualcomm Innovation Fellowship Korea	Seoul, S.Korea
2023	Travel Award , Conference on Neural Information Processing Systems (NeurIPS)	New Orleans, USA
2023	Scholarship , KAIST-Google Partnership Program	Daejeon, S.Korea
2023	East Asia Student Travel Grant , Google	New Orleans, USA
2023	Travel Award , International Conference on Learning Representations (ICLR)	Kigali, Rwanda
2019	Dean's List (Fall Semester) , Department of Engineering, KAIST	Daejeon, S.Korea
2019	Line Scholarship (Fall Semester) , School of Computing, KAIST	Daejeon, S.Korea
2017 - 19	National Science and Engineering Scholarship , Korea Ministry of Science and ICT	Daejeon, S.Korea

Academic Services

Conference Reviewer	ICML (2024-2026), NeurIPS (2024-2025), ICLR (2025-2027), CoRL (2026), AAAI (2026-2027), RSS (2026), ECCV (2026), RA-L (2027)
Workshop Reviewer	ICML Frontiers4LCD 2023, CoRL MRM-D 2024, NeurIPS WRM 2026

Reference

Kimin Lee	Assistant Professor at KAIST (kiminlee@kaist.ac.kr)
Jinwoo Shin	Full Professor at KAIST (jinwoos@kaist.ac.kr)
Yuke Zhu	Associate Professor at UT Austin & Director at NVIDIA GEAR (yukez@cs.utexas.edu)
Yijie Guo	Research Scientist at NVIDIA Seattle Robotics Lab (yijieg@nvidia.com)