Kwanyoung Park

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https://github.com/kwanyoungpark

EDUCATION

Seoul National University Mar '19 - Present
B.S. in Computer Science & Engineering GPA: 3.97 / 4.3
B.S. in Mathematical Sciences (Minor)
* Leave of absence for military service: July 2021 - Jan 2023

Stanford University Jun '23 - Aug '23
Visiting student GPA: 4.0 / 4.0

Gyeonggi Science High School Mar '16 - Feb '19
High school for gifted students in science and mathematics

RESEARCH INTERESTS

- Offline reinforcement learning
- Unsupervised reinforcement learning
- Robot learning

PUBLICATIONS (* denotes equal contribution.)

1. **Kwanyoung Park**, Youngwoon Lee
Model-based Offline Reinforcement Learning with Lower Expectile Q-Learning
Preprint, 2024 (submitted to **ICLR 2025**)

2. Junik Bae, **Kwanyoung Park**, Youngwoon Lee
TLDR: Unsupervised Goal-Conditioned RL via Temporal Distance-Aware Representations
Conference on Robot Learning **(CoRL), 2024**

3. **Kwanyoung Park***, Hyunseok Oh*, Youngki Lee
VECA: A New Benchmark and Toolkit for General Cognitive Development
AAAI Conference on Artificial Intelligence **(AAAI), 2022**
(Oral presentation, Acceptance Rate: 384/9,251 = 4.15%)

4. Junseok Park, **Kwanyoung Park**, Hyunseok Oh, Ganghun Lee, Minsu Lee, Youngki Lee, Byoung-Tak Zhang
Toddler-Guidance Learning: Impacts of Critical Period on Multimodal AI Agents
ACM International Conference on Multimodal Interaction **(ICMI), 2021**
(Oral presentation)

5. **Kwanyoung Park**, Junseok Park, Hyunseok Oh, Byoung-Tak Zhang, Youngki Lee
Learning Task-agnostic Representation via Toddler-inspired Learning
NeurIPS 2020 Workshop on BabyMind, 2020

EXPERIENCE

Yonsei RL Lab Jan '24 - Present

- *Undergraduate Research Intern* (Advisor: Youngwoon Lee)
  - Researching on scaling up model-based reinforcement learning algorithms to robotic tasks.
  - Researched on a model-based offline RL method that enables reliable long simulated rollouts (15 steps) by applying lower-expectile regression to λ-returns, improving long-term decision-making [1].
  - Researched on a goal-conditioned unsupervised RL algorithm that utilizes temporal distances [2].

SNU Human-Centered Computer Systems Lab Feb '23 - Dec '23

- *Undergraduate Research Intern* (Advisor: Youngki Lee)
  - Researched on a NeRF model architecture (with Gaussian Splatting) that can reduce network consumption for on-device applications.

Ministry of National Defense Jul '21 - Jan '23

- *Research Engineer (Military Service)*
  - Worked as main developer of an NLP project
  - Trained a BERT-based model for Korean language and fine-tuned it for sentence generation.

SNU Human-Centered Computer Systems Lab Jun '19 - Jun '21

- *Undergraduate Research Intern* (Advisor: Youngki Lee)
  - Developed VECA, which is the first benchmark to assess the overall cognitive development of an AI agent, including a toolkit to generate diverse and distinct cognitive tasks [3].
  - Researched the impact of guidance (e.g. offline trajectory, dense rewards) during reinforcement learning and its performance on transfer learning [4].
  - Developed a representation learning algorithm based on the agents interaction using VECA [5].

SCHOLARSHIPS

Presidential Science Scholarship Mar '19 - Present

- Korea Student Aid Foundation (KOSAF)
- Full tuition, living expenses support for undergraduate studies.

Gyeonggi-do Special Scholarship (Science Technology) Mar '16 - Feb '19

- Gyeonggi-do
- Full-ride scholarship for 3 years.

AWARDS

2023 | **Special Award**, MAICON 2023 (Military AI Competition)

2022 | **Special Award**, MAICON 2022 (Military AI Competition)

2018 | **Honorable Mention**, IMMC (International Mathematical Modeling Challenge)

2018 | **Bronze Prize**, Samsung Humantech Paper Award (Advisor: Hyunju Ju)
Modeling a Remora-Inspired Sucker Structure for Ship Flood Prevention Pads

2015 | **1st place**, KOI (Korea Olympiad in Informatics)

SKILLS

Programming Language

- C, C++, Python (Pytorch, Tensorflow, Jax), C# (Unity), Java

Machine Learning

- Reinforcement learning, Vision, 3D geometry (NeRF), NLP

Languages

- Korean: Native
- English: Proficient
  - GRE: 163/170 (Verbal), 169/170 (Quant), 4.5/6.0 (Writing)
- Japanese: Proficient
  - JLPT N1: 168/180

SERVICES

Reviewer

- Conferences: ICLR 2025
- Workshops: WCBM@CoRL 2024

TEACHING

Teaching Assistant

- AAI4160 Reinforcement Learning, Spring 2024