Mingyu Park

Electronics and Telecommunications Research Institute, Daejeon, Republic of Korea

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Education

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea
M.S. in the Robotics Program Feb 2023 – Feb 2025

- **Thesis:** *Model-based Reinforcement Learning with Improved Observational Generalization*
- **Advisor**: Donghwan Lee

Kwangwoon University Seoul, Korea
B.S. in Robotics Engineering Mar 2017 – Feb 2023

- **Honors**: Dean's List (2020, 2021)
- **Awards**: Merit scholarship ($10k; 2017, 2020 - 2022)
- Mandatory military service: (ROK Army; Mar 2018 - Nov 2019)

Publications

Mingyu Park*, Samyeul Noh*, Hyun Myung†, Donghwan Lee†, *VIGOR: Zero-Shot Visual Generalization via Latent-Space Consistency in Model-Based Reinforcement Learning*, NeurIPS 2026

Jongchan Park*, **Mingyu Park***, Donghwan Lee†, *Pretraining A Shared Q-Network for Data-Efficient Offline Reinforcement Learning*, NeurIPS 2025

Mingyu Park, Dongwhan Kim, Yonghwan Oh, Yisoo Lee†, *Computational Cost Reduction Method for HQP-based Hierarchical Controller for Articulated Robot*, KROS 2022

(* equal contribution, † corresponding author)

Research Experiences

Electronics and Telecommunications Research Institute (ETRI) Daejeon, Korea
Post-master's Researcher, Physical AI Research Laboratory Sep 2025 – Present

- Researched latent world models that leverage reward-free interaction data for goal-conditioned, long-horizon decision-making.
- Researched visual RL-based real-world manipulation with everyday objects.

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, Korea
Graduate Researcher, Reinforced Decision Intelligence Lab Feb 2023 – Feb 2025

- Researched offline RL that pretrains a Q-network with transition dynamics pretraining for data-efficient downstream RL.
- Researched model-based RL with vision inputs for visual generalization and sample efficiency in continuous control.

Seoul National University (SNU) Seoul, Korea
Undergraduate Research Intern, Dynamics Robotics Systems Lab Jan 2022 – Oct 2022

- Researched multi-LiDAR SLAM and Extended Kalman Filter for mobile manipulator navigation.
- Researched a whole-body controller using hierarchical quadratic programming for the mobile manipulator system.

Korea Institute of Science and Technology (KIST) Seoul, Korea
Undergraduate Research Assistant, Center for Humanoid Research Jun 2021 – Dec 2021

- Researched an optimal controller using hierarchical quadratic programming for the fixed-base redundant dual-arm manipulators.
- Integrated an optimal controller with object pose detection using ROS.

Selected Projects

Seoul National University (SNU) 2022
Wall-time efficient SLAM using multi-LiDAR on a single robot

- Investigated whether using multi-LiDAR sensors and rotary encoders for mobile robots with SLAM would be efficient in localization and map generation.

Kwangwoon University 2021
QP-based MPC for Differential-Drive Mobile Robot

- Implemented a quadratic programming (QP) based local controller for differential-drive mobile robot navigation.

Academic Service

Conference Reviewer: ICLR, ICML, NeurIPS (2026); **Gold Reviewer**: ICML 2026

Leadership & Training

Kwangwoon University Seoul, Korea
Coordinator (2022), Member (2020-2021), BARAM (Robotics Academic Group) Mar 2020 – Dec 2022

- Served as a club director for members by organizing an annual exhibition of hand-crafted robots.
- Organized academic seminars on robotics, mentored freshmen, and participated in semester-long robot projects.

Technical Skills

Programming: Python, C, C++, HTML, CSS, JavaScript

Frameworks/Libraries: ROS 1&2, Docker, TensorFlow, PyTorch, Jax, MuJoCo, Isaac Lab, Gazebo

Languages: Korean (Native), English (Proficient), Japanese (Intermediate)