Joonkyu Min

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Research Interest

My goal is to build AI agent that can truly understand and interact safely with the real world. I believe that building generalized agents via reinforcement learning is the key to achieve this vision. My research interests focus on two key directions:
Unsupervised Reinforcement Learning – including unsupervised skill discovery and zero-shot RL, which I view as a fundamental direction to build foundational policies of generalizable agents.
Safety Alignment of Foundation Models – especially for robot foundation models. I believe that enabling robots to adapt to diverse safety constraints would be crucial for real world deployment.

Education

Seoul National University, BS in Electrical and Computer Engineering — Mar 2020 – Feb 2026(expected)

- GPA: 3.81/4.3
- Selected Coursework(including ongoing): Introduction to Deep Learning, 3D Computer Vision, Robot Learning, Topics in Applied Mathematics(RL-LLM), Information Theory

Experience

Research Intern, SNU VGI lab — June 2024 – Mar 2025

- Worked on 3D gaussian splatting for feature field with Prof. Jaesik Park

Duty of National Defense, Auxiliary Police — May 2021 – Nov 2022

Projects

Offline Zero-shot RL for safe policy at test time

- Course Project of Robot Learning at SNU (ongoing)

KL-regularized FB representation for offline zero-shot RL

- Graduation Project with Prof. Insoon Yang
- Applied KL-divergence regularization approach to zero shot RL method

CF3: Compact and Fast Feature Field

- Hyunjoon Lee, Joonkyu Min, Jaesik Park
- Project during intern at SNU VGI Lab, Summited to ICCV 2025 (under review)
- Proposed an approach for constructing a compact and fast 3D feature field from given 3D Gaussian Splatting

Gaussian Splatting in the Dark

- Course project of 3D Computer Vision at SNU
- Proposed a method to learn robust gaussian splatting to render realistic novel views from dark and blurry scenes by initializing gaussians based on dense point tracking method instead of keypoint matching

SNU Autonomous Driving Student Club (ZERO)

- Worked on domain randomization with gazebo (ROS)

Skills

Languages: Korean: Native, English: TOEFL 102 (test date: 03/2024)

Technologies: C/C++, Python, Pytorch, CUDA