

# Subi Lee

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## Education

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**Gwangju Institute of Science and Technology (GIST)**  
School of Electrical Engineering and Computer Science  
GPA: 3.86/4.5

Mar 2021 - Present

**University of California, Berkeley**  
Exchange Student

Jun 2022 - Aug 2022  
Jan 2026 - May 2026

## Research Interest

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Reinforcement Learning, Robotics Learning, Autonomous Agent

My research interests focus on making robot learning more efficient and generalizable through reinforcement learning. Since most VLA models rely heavily on imitation learning, I aim to explore how reinforcement learning can be incorporated to help these models handle out-of-distribution (OOD) situations more robustly and acquire more generalizable skills.

## Work Experience

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**RLLAB (Yonsei AI)** | Prof. Youngwoon Lee | Undergraduate Intern  
**AILAB (GIST AI)** | Prof. Kyoobin Lee | Undergraduate Intern  
**Wrtn Technologies** | Community Manager

Sep 2025 - Present  
Mar 2025 - Aug 2025  
Jul 2023 - Feb 2024

## Research

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[1] G Cho\*, J Lee\*, J Im, **S Lee**, J Lee, S Kim (Under Review) **AMPED: Adaptive Multi-objective Projection for Exploration and Diversification.** in **NeurIPS 2025**

- Contributed on baseline experiment and surveyed related work.
- we propose a new method, Adaptive Multi-objective Projection for balancing Exploration and skill Diversification (AMPED), which explicitly addresses both exploration and skill diversification. We begin by conducting extensive ablation studies to identify and define a set of objectives that effectively capture the aspects of exploration and skill diversity, respectively.
- During the skill pretraining phase, AMPED introduces a gradient surgery technique to balance the objectives of exploration and skill diversity, mitigating conflicts and reducing reliance on heuristic tuning. In the subsequent fine-tuning phase, AMPED incorporates a skill selector module that dynamically selects suitable skills for downstream tasks, based on task-specific performance signals.

[2] G Cho\*, **S Lee\***, J Lee. **Evaluating Simplicial Normalization in Multi-task Reinforcement Learning.** **2024 Korea Software Conference**

- Contributed toy environment experiment and surveyed the preliminaries.
- While multitask learning provides improved generalization and sample efficiency compared to single-task learning, it often suffers from lower performance, which is a critical limitation. To address this issue, we replaced the ReLU activation function with the SimNorm activation function which has demonstrated effectiveness in single-task reinforcement learning.
- Our findings show that SimNorm appears to underperform compared to ReLU in the MTRL environments.

## Scholarships

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**National Science and Technology Scholarship — KOSAF**  
**Korea-U.S. Student Exchange Program Scholarship**  
— Korea Ministry of Trade, Industry and Resources

Mar 2021 – Feb 2025

Jan 2026 - May 2026

## Skills

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<b>CourseWorks</b>	Algorithm, Discrete Mathematics, Computer Architecture, Digital Design
-	Computer system, MLDL, System Programming, Reinforcement Learning, Random Process
<b>Software Engineering</b>	Python, C++, Git-based workflow, Shell
<b>Machine Learning</b>	Pytorch, JAX <b>Data Analysis</b> Numpy, Scipy, matplotlib, Jupyter
<b>English</b>	ETS TOEFL 108
<b>Note</b>	LATEX, Notion