

KUKJIN KIM

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SUMMARY

I'm interested in Deep Reinforcement Learning and Neural Networks. Currently, I'm working on Multi-Environment Reinforcement Learning for the foundation model of the RL agent. My goal is to develop an agent that can control robots and embedded systems. Furthermore, I want to make them versatile for multiple tasks.

SKILLS

Development: Python, C++, Linux, Git, Docker, Yocto, CMake, GCP, AWS

RL related: PyTorch, TorchRL, Tensorflow, Jax, Ray, RLLib, Unity, Hydra

EDUCATION

3/2022 - 2/2024 **Korea University**
M.S., Computer Science
SUPERVISOR: PROF. CHANGHEE JOO

3/2016 - 2/2022 **Kyunghee University**
B.S., Industrial Management Systems Engineering and Software Convergence (Double Major)

PUBLICATIONS

W1 **Agnostic Architecture for Heterogeneous Multi-Environment Reinforcement Learning** NeurIPS 2023
Foundation Models for Decision Making Workshop
Kukjin Kim, Changhee Joo. [\[Link\]](#)

WORK EXPERIENCE

2/2024 - Current **LG Electronics, Research Engineer**
• Developing an AI-based fault-detection algorithm.

8/2021 - 02/2022 **MODULABS, Lecturer**
• Taught basics of deep learning, Python, Pytorch, and Tensorflow.

RESEARCH EXPERIENCE

4/2022 - 12/2023 **DIYA Study Group Leader (Do It Yourself AI)** Academic Club
• Studied structured state-space sequence model and Jax. [\[Link\]](#)
• Studied RL papers and multi-task and meta-reinforcement learning course (CS330)

6/2022 - 8/2022 **MODULABS**
• Studied state-of-the-art text-to-speech models. [\[Link\]](#)

3/2020 - 2/2021 **Undergraduate Research Student**
KYUNGHEE UNIVERSITY SMARTFACTORY LAB (PROF. JUMYUNG UM)
• Researched on reinforcement learning for the robotic gripper.

PROJECTS

3/2023 - 12/2023 **LG Industry-Academia Collaboration Project**
Developed an anomaly detection model for the refrigerant compression dataset.

3/2023 - 12/2023 **ETRI Satellite Simulation Project**
Developed an interactive web application for satellite frequency sharing analysis.

2021 **RL Algorithm, Minecraft RL Agent**
Implemented A3C Algorithm and Minecraft RL Agent with DQN, ApeX+DQFD [\[Link\]](#)

TEACHING EXPERIENCE

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|--------------------------|--|
| 2022 Spring
2023 Fall | Teaching Assistant <ul style="list-style-type: none">• <i>Korea University</i>• Course: Reinforcement Learning. |
| 2023 Winter | Teaching Assistant <ul style="list-style-type: none">• <i>LG Electronics AI Camp</i>• Course: Reinforcement Learning. |
| 11/2022 | Invited Talk <ul style="list-style-type: none">• <i>Korea Atomic Energy Research Institute</i>• Introduction to Reinforcement Learning. [Link] |
| 3/2022 - 8/2022 | Lecturer <ul style="list-style-type: none">• <i>Korea University Computer Club</i>• Course: Python, Deep Learning. |

SCHOLARSHIPS

- | | |
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| 2023 | LG Industry-Academic Scholarship Student <p>Received scholarships for one year of graduate school,</p> |
| 2016-2022 | National Scholarship for Excellence in Science and Technology, KOSAF <p>Received scholarships for all four years of college</p> |