Daniel Hyochan Chong

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EDUCATION

Sungkyunkwan University (SKKU)   2019 – 2025
- B.S. in Mechanical Engineering, B.S. in Artificial Intelligence (double major)

EXPERIENCE

Samsung Research   July 2024 – August 2024
Software Engineer Intern
- To work on efficient large language models (weight quantization)

GoLe Robotics   April 2024 – June 2024
Software Engineer Intern
- Optimized CPU usage of depth camera software by over 5x
- Developed multi-camera bird's-eye-view (BEV) function for an autonomous mobile robot

Korea Advanced Institute of Science and Technology   January 2024 – March 2024
Research Intern (Advisor: Professor Joseph J. Lim)
- Researched and surveyed 3D vision methods for robot manipulation in dynamic environments
- Implemented machine learning papers from scratch using PyTorch, including *Reward-Induced Representation Learning (Jain et al., 2020)* and *Proximal Policy Optimization Algorithms (Schulman et al., 2017)*

Sungkyunkwan University   June 2023 - December 2023
Research Intern (Advisor: Professor Hyungpil Moon)
- Designed and tested mobile robot prototypes in Gazebo
- Developed obstacle detection algorithms to detect specific obstacles (stairs, ramps, bumps) and their physical properties (step dimensions, ramp slope, bump dimensions etc.) for an autonomous mobile robot

PROJECTS

rirl-pytorch | *Python, Pytorch*
- From-scratch PyTorch implementation of the paper *Reward Induced Representation Learning (Jain et al., 2020)*
- Implemented *Proximal Policy Optimization Algorithms (Schulman et al., 2017)* with PyTorch from scratch to successfully reproduce paper results

gole-surround-view | *Python, ROS, Linux, Numpy*
- Implemented and improved surround view (bird's eye view) for an autonomous mobile robot
- Reduced latency of the real-time system via profiling, multi-threading, and code optimization

OTHER

- **Research Interests**: Efficient Deep Learning, Computer Vision, Reinforcement Learning
- **Languages:** English (Native, <u>TOEFL</u>: 119/120, <u>GRE</u>: 161/170 (Verbal), 170/170 (Quant), 5.5/6.0 (Writing))
              Korean (Native)
- **Extracurriculars:** NPC (Programming Club), SKEDA (English Debate Association)
- **Military Experience:** Republic of Korea Army (January 2021 - July 2022)
              United Nations Mission in South Sudan (August 2021 - April 2022)