Daniel Hyochan Chong

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EDUCATION

Sungkyunkwan University **June 2025**
• B.S. in Mechanical Engineering, B.S. in Artificial Intelligence (double major)

WORK EXPERIENCE

Samsung Research **July 2024 – August 2024**
SWE Intern - SoC Architecture Team - Neural Network Analysis & Design (NNAD) Group Seoul, South Korea

- Implemented post training quantization (weight quantization and static quantization) algorithms to quantize computer vision models and large language models for on-device AI
- Worked on adding custom quantization functionalities (per-channel, per-token quantization) to internal quantization tools

GoLe Robotics **April 2024 – June 2024**
SWE Intern Seoul, South Korea

- Research and development for multi-camera bird's-eye-view (BEV) functionalities for an autonomous mobile robot, prior to Series A Funding

RESEARCH EXPERIENCE

IRIS Lab, **Sungkyunkwan University** **August 2024 – Present**
Research Intern (Advisor: Professor Jong Hwan Ko) Suwon, South Korea

- Researching dynamic neural networks and model compression (quantization, low-rank adaptation) for computer vision models (CNN, ViT)
- Researching post-training quantization methods for large language models

CLVR Lab, **KAIST Graduate School of AI** **January 2024 – March 2024**
Research Intern (Advisor: Professor Joseph J. Lim) Seoul, South Korea

- Researched and surveyed 3D vision methods for robot manipulation in dynamic environments
- Implemented *Reward-Induced Representation Learning (Jain et al., 2020)* and *Proximal Policy Optimization Algorithms (Schulman et al., 2017)* from scratch

RISE Lab, **Sungkyunkwan University** **June 2023 – December 2023**
Research Intern (Advisor: Professor Hyungpil Moon) Suwon, South Korea

- Implemented, designed, and tested mobile robot prototypes in Gazebo simulator
- 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

llm-vison-quant | *Python, Pytorch*

- Implemented and applied weight quantization algorithms to large language models and computer vision models
- Utilized and improved internal quantization libraries for static quantization by working on per-channel and per-token quantization functionalities

HONORS & AWARDS

Academic Excellence Scholarship, Sungkyunkwan University, 2024
Dean's List, Sungkyunkwan University, 2024

OTHER

• **Languages:** English (Native, **TOEFL: 119/120**), 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, Military Interpreter (August 2021 - April 2022)