

Vaughn Sohn

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EDUCATION

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| Korea Advanced Institute of Science and Technology (KAIST)
M.S., Electrical and Electronic Engineering | Daejeon, Korea
August 2024– |
| Konkuk University
B.S., Computer Science and Engineering, GPA: 4.4/4.5
– Thesis: LRS-GB: Learning Rate Schedule for Fine-Tuning with Generalization Bound Guarantee | Seoul, Korea
March 2021–August 2024 |

RESEARCH INTERESTS

- Quantum Computing
- Quantum Machine Learning
- Quantum Information Theory
- Reinforcement Learning

EXPERIENCE

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| Research Assistant, KAIST | Daejeon, Korea |
| Undergraduate Research Assistant, Konkuk Univ.
<i>Connected Intelligence Lab (CoIn)</i>
– Develop algorithm for partitioning and offloading the computation tasks of deep neural networks
– Studying Lyapunov Optimization, Deep Learning and Reinforcement Learning | Seoul, Korea
August 2022 –May 2024 |

PUBLICATIONS

- [1] **Vaughn Sohn**, Suhwan Kim, Hyang-Won Lee, “Layering RL and Lyapunov Optimization for Video Frame Drop and Object Detection Task Offloading”, *Under Review*, 2024.

PROJECTS

- LRS-GB: Learning Rate Schedule for Fine-Tuning with Generalization Bound Guarantees August 2023 –June 2024
– Propose a new fine-tuning algorithm that enhance the generalization performance.
– *Team Lead*
- RAID: Reinforcement Assisted Image Defense against Adversarial Attacks August 2023 –December 2023
– Design an adversarial defense method via Deep RL.
– *Team Lead*

TEACHING

- **Teaching Assistant** at Konkuk Univ. 2022 –2023
 - *Discrete Mathematics* Fall 2023
 - *Probability and Statistics* Spring 2023
 - *Linear Algebra* Fall 2022
 - *C Programming* Spring 2022

SKILLS

- **Programming Languages:** Python(Pytorch), C++/C, Java
- **ML/DL baselines:** CV(YOLO), DRL(DQN, PPO), Adversarial Attack(PGD, OPA)
- **IoT Devices:** RasperryPI, Jetson Nano
- **Etc:** OMNeT++, MATLAB

SCHOLARSHIPS AND AWARDS

- Scholarship for Academic Excellence, Konkuk University 2021 –2024
 - *2023, 2nd semester*
 - *2022, 2nd semester*
 - *2021, 1st and 2nd semester*
- Dean's List, Konkuk University 2021 –2024
 - *2024, 1st semester*
 - *2023, 2nd semester*
 - *2022, 1st and 2nd semester*
 - *2021, 1st and 2nd semester*
- Scholarship for Woon Hae Foundation 2022
- Undergraduate Paper Award, Korean Institute of Communications and Information Sciences August 2023
- Undergraduate Paper Award, Korean Institute of Communications and Information Sciences February 2023