Krit Surintraboon

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Education

Tohoku University, Sendai Japan **Oct. 2021 – Present**

- International Mechanical and Aerospace Engineering Course, Computer Architecture Laboratory
- GPA (6 semester): 3.66/4 (AA counts as 4 and A counts as 3)
- President Fellowship Scholarship, Heiwa Nakajima Scholarship (Apr 2023 - Mar 2024)

Miina Härma Gümnaasium, Tartu Estonia (Exchange year in Estonia) **Aug. 2018 – July 2019**

- International Baccalaureate Diploma Programme (IB)

Darunshikkhalai Highschool, Bangkok Thailand **June 2017 – Apr. 2021**

- Engineering Science Classroom (ESC) course • GPA: 3.93/4

Skills

Python (Proficient) • C (Basic) • Fortran (Basic) • Octave (Basic) • JavaScript (Basic) • SolidWorks (Proficient) • English (IELTS 8.0) • Japanese (JLPT N3)

Relevant Courses

Control Engineering • Robotics • Fundamental of Information Science • Computational Mechanics • Computer Architecture • Natural Language Processing

Research Experience

Collaborative research with NEC Corporation on computer systems focusing on quantum annealing machines (Laboratory Assistant) **May 2024 – Present**

- Worked closely with an associated professor from NEC to improve the simulated quantum annealing system (LHZ scheme), an algorithm aims to solve combinatorial optimization problems.
- Approached the problem by optimizing the constraints values among simulated qubits, expecting to promote viable solutions with lower constraint values.

Optimization of Wireless Power Transmission Model **Dec. 2019 – Apr. 2020**

- Optimized the WPT system by simulating magnetic field behavior in different coil types and modeling a small WPT in COMSOL to study the relation between frequency, range and efficiency.

Learning Project

Implementing the rotary embedding in the transformer architecture **Dec. 2024**

- Learned the foundation of AI and implemented the knowledge by applying rotations to query and key vectors to a basic transformer model.

Robot arm design **July. 2024**

- Used SolidWorks to model robot arm parts, assemble, and create a 2D drawing of each part.

Object deformation simulation **Jan. 2024**

- Used Python and finite elements method to simulate the deformation of a square-shaped object with a square-shaped hole under a tensile force.

Other Activities

JIGE Internship Business Competition Top 3 – Kansai University **Nov. 2024**

- Collaborated with team members to develop a market expansion plan to Europe for vegan leather company. This includes market research, entry strategy, risk mitigation, and poster presentation

University Bluegrass Music Circle **Mar. 2022 – Oct. 2023**

- Joined a country music club, actively engaging to build friendships with Japanese members.

Head of the Editorial Department for Class Newsletter **Dec. 2019 – Apr. 2020**

- Collaborated with classmates to create a semester summary book, fostering connections, effectively assigning roles, and achieving good results.