

Seungeui Byun

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RESEARCH INTERESTS

- Communications, Message Passing, Machine Learning, Quantum Computing

EDUCATION

Korea University

Mar. 2020 – Present

Undergraduate Student

Seoul, Korea

- Bachelor of Science in Electrical Engineering
- Total GPA of 4.04/4.5 (3.82/4.0), graduated with Great Honors

RESEARCH EXPERIENCES

Undergraduate Research Assistant

Jan. 2025 – Present

Lab for Informatics, Communications, and Systems | Korea University

Seoul, Korea

- Advisor: Professor Sang Hyun Lee
- Researched about NLoS position determination technology.
- Solved problem by message passing and quantum algorithm.
- Verified algorithm using Python and 3D city model by Unity engine.
- Gave a poster presentation and wrote Bachelor's thesis about the research.

Undergraduate Individual Study

Dec. 2024 – Feb. 2025

Info Lab | Korea Advanced Institute of Science and Technology

Daejeon, Korea

- Advisor: Professor Si-Hyeon Lee
- Studied about resource allocation optimization in mobile edge computing (MEC) environment.
- Established new multi-user, multi-UAV model using clustering algorithm.

PERSONAL PROJECTS

Maze Tracker | Production for HandS Hardware Hackathon

Sep. 2024

- Built maze-tracking car using infrared sensors and MOSFETs, hardware-only logic without microcontrollers.

Style-Finding Model for Historical Paintings | Pytorch, pandas, Imagenet, Resnet

June 2024

- Developed CNN model using VGGNet-19 and ResNet-152, achieved accuracy of 84 %.
- Gave a poster presentation about the model and its results.

AWARDS AND HONORS

Semester High Honors

July 2025

Semester High Honors

Jan. 2025

4th place on IBM Qiskit Fall Fest 2024, IBM Quantum and Korea University

Nov. 2024

1st place on HandS Hardware Hackathon, Korea University (around 30 participants)

Sep. 2024

Semester High Honors

Jan. 2021

Semester High Honors

July 2020

SKILLS

Programming Languages: C, Python, MATLAB, Verilog, \LaTeX

Languages: Korean (Native), English (Fluent, TOEIC 990)

Developer Tools: Git, VS Code, Visual Studio

Libraries: pandas, NumPy, Matplotlib, Pytorch, Qiskit

ACTIVITIES

Korea University Engineering Community Service

Mar. 2024 – Present

Member of management team

- Voluntary organization dedicated to teaching elementary school students about engineering.
- Focused on introducing elementary students of Dongdaemun District to basic science and engineering concepts.
- Participated in KUECS School, introducing middle and high school students to university life and academics.

Quantum Information Club at Korea University

Mar. 2024 – Present

- Participated in IBM Qiskit Fall Fest 2023 and 2024, held in Korea University.
- Participated in Quantum Summer School 2024, held by Korean Physical Society.
- Joined Quantum Information Science Club Association (Korea Univ., Seoul Nat'l Univ., Yonsei Univ., KAIST).

Global Leadership Program

Aug. 2025

Korea University, Keio University

Seoul, Korea and Tokyo, Japan

- Held by Korea University Innovation Center for Engineering Education.
- Korea University–Keio University undergraduate exchange program focused on global leadership development.
- Engaged in lectures and discussions conducted entirely in English on key subjects.
- Awarded a certificate of completion for the program.

HandS, KU EE Hardware & Software Community

Sep. 2023 – Feb. 2025

- Participated in Raspberry Pi seminar, imbedded system and CV studies.
- Participated in HandS Hardware Hackathon, won first place.
- Worked in natural language processing project, related to deep learning.

One and Zero, KU EE Software Community

Mar. 2023 – Jan. 2024

- Participated in deep learning study and Python seminar.

Korea University Computer Club

Sep. 2020 – July 2021

Member of management team

- Studied pandas package in Python for various data processing.
- Participated in HTML/CSS/JS study and simple web programming project.

OTHER EXPERIENCES

Dolbit, Korea University Movie Production Club

Mar. 2023 – Present

Sound Director, Production Leader, Actor

- Participated in four movies as an actor, three movies as a sound director.

Military Band, 2nd Operations Command, Republic of Korea Army

Sep. 2021 – Mar. 2023

Clarinetist, Personnel Administrator

Daegu, Korea

- Mandatory service as a Republic of Korea citizen.
- Served as a first clarinet role for military band of the command.
- Managed squad's personnel information, selected as an Excellent Personnel Unit.

Last updated on July 2nd, 2025.