

SEUNGEUI BYUN

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RESEARCH INTERESTS

- Communications, Variational Inference, Machine Learning, Combinatorial Optimization, Quantum Computing

EDUCATION

Korea University Mar. 2026 – Present
Graduate Student Seoul, Korea

- Master of Science in Electrical and Computer Engineering

Korea University Mar. 2020 – Feb. 2026
Undergraduate Student Seoul, Korea

- Bachelor of Science in Electrical Engineering
- Cumulated GPA of 4.08/4.5 (3.84/4.0), graduated with Great Honor
- Completed mandatory military service in 2nd Operations Command band, ROK Army. (Sept. 2021 - Mar. 2023)

PUBLICATIONS

- Wookjin Lee, Jungbum Lee, Gum Kim, **Seungeui Byun**, and Sang Hyun Lee, "A testbed implementation of LLM-based intent coordination for autonomous RAN management," *IEEE International Conference on Communications Workshops (ICC Workshops)*, May 2026.
- **Seungeui Byun**, Yong Hun Jang, and Sang Hyun Lee, "An online framework for optimal routing in large-scale IoT networks," *Korea Institute of Communications and Information Sciences (KICS) Winter Conference*, Feb. 2026.
Awarded as Best Undergraduate Paper

RESEARCH EXPERIENCES

Graduate Research Assistant Mar. 2026 – Present
Lab for Informatics, Communications, and Systems | Korea University Seoul, Korea

- Advisor: Professor Sang Hyun Lee

Undergraduate Research Assistant Jan. 2025 – Feb. 2026
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 (KAIST) 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.

TEACHING EXPERIENCES

Teaching Assistant Mar. 2026 – Present
Undergraduate courses of Korea University

- Spring 2026: KECE209 Probability and Random Process, COMM201 Advanced Communications Mathematics I

Research and Experiment (RnE) Assistant Aug. 2025 – Dec. 2025
Korea University, Seoul Science High School

- Fall 2025: Conducted a RnE project to develop quantum computing algorithm for NLoS vehicular localization with four students from Seoul Science High School, one of the most prestigious high schools in Korea.

AWARDS AND HONORS

Best Undergraduate Paper Award in KICS Winter Conference 2026	Feb. 2026
Semester High Honors	Jan. 2026, July 2025, 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, July 2020

SKILLS

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

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

Developer Tools: Git, VS Code, Visual Studio, Unity 3D

Libraries: pandas, NumPy, Matplotlib, Pytorch, Qiskit

ACTIVITIES

Korea University Engineering Community Service Mar. 2024 – Feb. 2026

Member of management team

- Voluntary organization dedicated to teaching elementary school students about engineering.
- Brought diverse science experiments to elementary students in the Dongdaemun and Seongbuk districts, Seoul.
- Participated in KUECS School, introducing middle and high school students to university life and academics.

Quantum Information Club at Korea University Mar. 2024 – Aug. 2025

Regular member

- 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).

K2 Global Leadership Program Aug. 2025

Korea University, Keio University

Seoul, Korea and Tokyo, Japan

- Full-funded program 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 subject related to international relations.
- Awarded a certificate of completion and MVP award for the program.

HandS, KU EE Hardware & Software Community Sep. 2023 – Feb. 2025

Regular member

- 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 – Feb. 2024

Regular member

- Participated in deep learning study and Python seminar.

Korea University Computer Club Sep. 2020 – Aug. 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.