

Heeseung Choi

hschoi@yonsei.ac.kr — (+82) 10-5060-4423 — LinkedIn

Education

Yonsei University, Seoul, South Korea

03/2020 - 02/2026

Bachelor of Engineering in Electrical and Electronic Engineering

GPA: 4.07/4.30

University of Georgia, GA, United States

08/2024 - 12/2024

Exchange Program

GPA: 4.00/4.00

Research Experience

Undergraduate Researcher

Seoul, South Korea

Yonsei University — Advisor: Prof. Byung-Wook Min

01/2025 - Present

- Researching RF circuit design and optimization at the Microwave Integrated Circuit and System Lab.

Project Experience

Undergraduate Capstone Design

Seoul, Korea

Title: A 7.5-8.5 GHz Wideband 1-Bit Phase Shifting Switch Module for Reconfigurable Intelligence Surface

- Designed a wideband 1-bit phase-shifting switch module for Reconfigurable Intelligent Surface (RIS) applications, operating in the 7.5-8.5 GHz range.
- Implemented an optimized matching network for reliable wideband 1-bit phase shifting, and achieved excellent high-frequency performance using GaAs HEMT technology.

Infrared Sensor PCB Design

Seoul, Korea

PCB Design

- Designed and fabricated an infrared sensor using Eagle CAD.
- Created custom libraries and layouts, completed schematic and board design, and assembled the prototype after generating Gerber files.

Audio Equalizer Design

Seoul, Korea

Analog Circuit Design

- Built an audio equalizer using LPF, BPF, HPF, a summing amplifier, and a push-pull stage, simulating performance in PSPICE beforehand.
- Implemented the design on a breadboard and added a volume controller for gain tuning.

FPGA-Based Barnsley Fern Visualization

Seoul, Korea

Digital System Design

- Implemented Barnsley Fern fractals on an LCD using the Pynq-Z2 and Verilog.
- Used FSM to adjust iteration count via buttons and rendered RGB pixel data by storing it in BRAM.

Samsung Shining Star Program

Suwon, South Korea

Project Link — Team Leader

- Participated in the Samsung Shining Star Program, gaining knowledge of semiconductor technology through lectures and site visits.
- Led the team through tasks and interacted with professionals at Samsung Electronics.

Publications

[1] Here we go soon.. [PDF]

Awards & Scholarships

Korea-U.S. Technology Fields Exchange Program Scholarship

Korea Institute for Advancement of Technology

Seoul, South Korea

03/2024 - 12/2024

- Awarded to 90 top engineering students selected for U.S. exchange programs and received \$9,000 per semester.

Yonsei University Semiconductor Track Program

Yonsei University

Seoul, South Korea

03/2024 - 02/2025

- Selected among top-performing students in semiconductor fields and awarded a merit-based scholarship of approximately \$1,000 per semester.

High Honors : Spring 2020, Spring & Fall 2023, Spring 2024

Yonsei University

Seoul, South Korea

03/2020 - Present

- Awarded to top 3% students each semester for outstanding achievement.

Work Experience

Republic of Korea Army

Sergeant

Sacheon, South Korea

05/2021 - 11/2022

- Served as a military driver and awarded Outstanding Driver.

Skills

- **Relevant Coursework:** Electronic Circuits I/II, Electricity & Magnetism I/II, Antenna Engineering, Signal & System, Communication Theory, Digital Signal Processing
- **Tool:** PSPICE/LTSPICE, ADS, MATLAB, VIVADO
- **Programming:** Python, C/C++, Verilog, R

Extracurricular Activities

Yonsei Yacht Research Association - Yonsei Sailing Team

Administrative Officer

Seoul, South Korea

07/2023 - Present

- Collaborated with team members through sailing and training and managed club operations as Administrative Officer in the second year.