

Haneul Park

☎ +82-10-6300-0003 | ✉ skyp0714@gmail.com | 🏠 skypark.me | 🌐 github.com/skyp0714

Research Interests

- High Performance, Energy-Efficient Cloud Systems
- System Modeling and Simulation
- Domain-Specific Hardware

Education

Seoul National University

B.S. in Electrical and Computer Engineering

Seoul, Korea

Mar 2018 - Current

- GPA: 4.16/4.3 (overall), 4.21/4.3 (major), 4.25/4.3 (upper division)

Experience

Architecture and Code Optimization Lab

Seoul National University, Korea

Undergraduate Researcher, Advised by Professor Jae W. Lee

Jul 2022 - Current

- Involved in project proposing **OS transparent DRAM power management** for disaggregated memory
- Conducted experiment on scheduling virtual machines running Cloudsuite 4.0 and STREAM benchmark based on Microsoft Azure VM Trace
- Analyzed and estimated performance and DRAM power metrics for aggressive rank-level power down by using PCM for measurement and Quartz for emulating remote DRAM latency
- **In submission** to the 50th ACM/IEEE International Symposium on Computer Architecture (**ISCA**), June 2023

High-Performance Computer System Lab

Seoul National University, Korea

Senior Project, Advised by Professor Jangwoo Kim

Jan 2022 - Jul 2022

- Enabled multi-GPU performance modeling in system emulated gem5 single-GPU simulator
- Extended existing gem5 GPU model by duplicating GPUs and rearranging Ruby memory interface
- Modified emulated kernel driver to distinguish GPU ID and doorbell region of each GPU from others

2022 Deep Learning Hardware Design Competition

Polaris, Korea

2nd Place, Nationwide Competition

Feb 2022 - Jul 2022

- Designed and implemented high-performance and power-efficient FPGA accelerator for CNN inference
- Exploited datapath without weight reuse and adder tree-based parallel convolution of degree 4
- **Organized presentation**, IEEE International Conference on Artificial Intelligence Circuits and Systems (**AICAS**), 2022

Honors & Awards

2022	2/111 , 2022 Deep Learning Hardware Design Competition, won \$2,000	Polaris
2019	OK Bae & Jung Scholarship , \$20,000 over two years	OK Foundation
2018	Presidential Science Scholarship , \$40,000 for undergraduate course	Korea Student Aid Foundation
2017	Bronze Medalist , 2017 Korean Young Physicists' Tournament	Korean Physical Society
2015, 2016	Completion , Winter Program for Korea Physics Olympiad	Korean Physical Society

Teaching Experience

Calculus 1 & Calculus 2	Peer tutor, Provided 30 hours of lecture for freshman (Spring 2019, Fall 2022)
Engineering Mathematics 1	Peer tutor, Provided 30 hours of lecture for sophomore/junior (Fall 2019)

Extracurricular Activities

Auxiliary Police

Network Maintenance Engineer, Seoul Mobile Police Headquarters (Feb 2019 - Aug 2021)

Completed South Korea's mandatory military service taking a leave of absence from university

Volunteer Activity

Total 338 hours, consists mostly of teaching activities

Skills

Language & Tool

C/C++, Python, Bash, Verilog, HTML/CSS/JavaScript, LaTeX, Docker, MATLAB, R

English Proficiency

TOEFL (105/120), TOEIC (985/990)