Soohyun Cha (차수현)

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EDUCATION

Seoul National University

Master's Course in Electrical and Computer Engineering Mar. 2024 – Feb. 2026 (expected)

- Advisor: Prof. Jaewoong Sim
- Research interest: Computer systems for efficient serving of emerging machine learning workloads, such as large language models (LLMs)
- Thesis: (Ongoing) Efficient Serving of Large Language Models with Adaptive Speculative Decoding
- GPA: 4.04 / 4.30

Seoul National University

Bachelor of Science in Electrical and Computer Engineering Mar. 2018 – Feb. 2024

- GPA: 3.74 / 4.30, Major GPA: 3.80 / 4.30 (Graduated with *Cum Laude*)
- Full-tuition scholarship for 8 semesters by the National Science and Engineering Scholarship, Korea Student Aid Foundation (KOSAF)

WORK EXPERIENCES

Samsung Research, Samsung Electronics Seoul, Republic of Korea

Summer Internship July 2022 – Aug. 2022

- Designing a deep neural network-based predictor for KPI (Key Performance Indicator) used in a communication system

PUBLICATIONS

MX+: Pushing the Limits of Microscaling Formats for Efficient Large Language Model Serving

Jungi Lee, Junyong Park, **Soohyun Cha**, Jaehoon Cho, Jaewoong Sim

Proc. of the 58th International Symposium on Microarchitecture (MICRO), Seoul, Korea, Oct 2025

TEACHING EXPERIENCE

Graduate Teaching Assistant at Seoul National University

- Digital Systems Design and Experiments, ECE 315.A Fall 2024
  - Lab session for Verilog and FPGA board practices
  - Q&A session for implementing end-to-end CNN accelerator on FPGA board
- Computer Organization, ECE 322 Spring 2024
  - Q&A session for implementing a pipelined CPU with a branch predictor in RTL and a cycle-level cache system in C++
  - Recitation session for reviewing topics on CPU microarchitecture

Undergraduate Course Tutor at Seoul National University

- Digital Systems Design and Experiments, ECE 315.A Fall 2023
  - Q&A for Verilog, FSM (finite state machine), and digital arithmetic/numerics

- Basic Computing, Faculty of Liberal Education Fall/Spring 2023, Fall/Spring 2022
  - Q&A for Python tutorial covering Numpy, Matplotlib, and Pandas
  - Outstanding tutor award (Fall 2023)

SKILLS

Programming Language: Python, Verilog/SystemVerilog, C/C++, CUDA
Frameworks: PyTorch, Hugging Face Transformers, Triton
Tools: Nsight Systems, Xilinx Vivado
Platforms: Linux, Artix-7 FPGA board
Language: Korean (Native), English (TOEIC Speaking: Intermediate High)

MISCELLANEOUS

Military Service at the Republic of Korea Army July 2020 – Jan. 2022

Completed 18 months of mandatory military service in the Republic of Korea Army