

AKIHO KAWADA

Contacts: akihokawada@ecc.u-tokyo.ac.jp

Pronouns: she/her/hers ♦ Nationality: Japanese

Website: <https://akiho-kawada.github.io/>

EDUCATION

the University of Tokyo

Bachelor of Engineering in Systems Innovation

Advisors: Prof. Yutaka Matsuo and Prof. Yusuke Iwasawa

April 2021 – March 2026 (Expected)

Tokyo, Japan

EXPERIENCE

Cornell University – Cornell Tech

Undergraduate Research Assistant

June - November 2025 (Expected)

Remote

- Supervisor: Prof. Udit Gupta
- Project: Agentic AI Systems

the University of Tokyo

Thesis Student

April - September 2024, January 2025

Tokyo, Japan

- Advisors: Prof. Yutaka Matsuo and Prof. Yusuke Iwasawa
- Research Group: Matsuo-Iwasawa Lab
- Explored training-free network pruning methods by identifying high-performing sparse subnetworks with fixed initial weights.

University of California, Santa Barbara

Visiting Student Researcher

October - December 2024

Santa Barbara, CA

- Supervisor: Prof. Jonathan Balkind
- Research Group: UCSB ArchLab
- Project: Pengwing, A Novel Blended OS for Heterogeneous SoCs
- Implemented a hardware-based `malloc` in RTL for heterogeneous computing systems. Verified correct operation on FPGA in conjunction with a hardware garbage collector.

Google Summer of Code

GSoC Student / Contributor

May - August 2024

Remote

- Mentors: Dr. Jonathan Balkind, Dr. César Fuguet Tortolero and Ms. Noelia Oliete Escuín
- Organization: Free and Open Source Silicon Foundation
- Project: Transforming the OpenHW High Performance Data Cache into a High Performance Instruction Cache
- Extending the high-performance data cache (HPDC) integrated into the CVA6/Ariane core to also function as an instruction cache.

the University of Tokyo

Research Intern

October 2023 - June 2024

Tokyo, Japan

- Supervisor: Prof. Atsutake Kosuge
- Research Group: Kosuge Lab, Department of Electrical Engineering and Information Systems, Graduate School of Engineering, the University of Tokyo
- Conducted RTL design, evaluation, and FPGA validation of pre-processing hardware modules for energy-efficient DNNs.

AKARI, Inc
Machine Learning Engineer Intern / Software Engineer Intern

December 2022 - January 2024
Tokyo, Japan

- Employment type: Full-time (Feb–Mar, Aug–Sep 2023); Part-time (other months)

AWARDS/GRANTS

the University of Tokyo Musha Shugyo Program July - December 2024
Granted two months of stipend and travel costs.

PUBLICATIONS

A 250.3mW Versatile Sound Feature Extractor Using 1024-Point FFT 64-ch LogMel Filter in 40nm CMOS
Akiho Kawada^{*}, Kenji Kobayashi^{*}, Jaewon Shin, Rei Sumikawa, Mototsugu Hamada, Atsutake Kosuge
the IEEE Asia Pacific Conference On Circuits and Systems (APCCAS) 2024

TECHNICAL SKILLS

Programming Languages / HDL	Verilog/SystemVerilog, Python3, Javascript/TypeScript, C/C++
Frameworks	PyTorch, React, NextJS
Hardware Tools	Verilator, Vivado, Synopsys VCS & Verdi
Devops / Tools	Docker, Kubernetes, Git