Sandith Ganhewage

+1 (336) 988-6168 | North Carolina, US | sandith.ganhewage@duke.edu |
linkedin.com/in/sandith-ganhewage | github.com/sganhewage | sganhewage.github.io/portfolio

EDUCATION

Duke University, *Electrical & Computer Engineering and Computer Science* Expected Graduation: May 2027

- GPA: 4.00/4.00
- Dean's List with Distinction (Fall 2024 and Spring 2025), J. Welch Harriss Scholar
- Relevant Coursework: Engineering Design & Communication, Data Structures & Algorithms, Computer Architecture, Linear Algebra, Fundamentals of Electrical & Computer Engineering

WORK/RESEARCH EXPERIENCE

narb, College Park, MD (Remote) July 2025 — Present
Software Engineering Intern

- Designed user application for multi-modal LLM technology, utilizing Convex and Clerk for a 30% increase in development speed.
- Developed in React and React Native to develop and deploy a cross-platform front end solution, increasing overall usability.
- Migrated existing applications to a new cross-platform framework prioritizing rapid development and simple implementation.

Qorvo Inc., Greensboro, NC May 2025 — Jul. 2025
Embedded Systems Engineering Intern

- Designed an embedded systems solution to chip sorting with the Synax S9 Handler, reducing testing configuration time by 25%.
- Deployed a company-wide solution for 50+ employees through an intranet-hosted web interface with React and Node.js.
- Implemented low-level Arduino GPIB interface, used alongside a Raspberry Pi connecting to the universal web UI via bluetooth.

Duke Center for Computational and Evolutionary Intelligence, Durham, NC Jan. 2025 — May 2025
Undergraduate Researcher

- Tested and researched machine learning model quantization and distillation techniques to reduce model size by up to 30% and inference latency by up to 10% while maintaining model accuracy using PyTorch libraries.
- Researched genome-sequencing-focused applications in 5 established bioinformatics algorithms for increased efficiency through hardware acceleration by tri-state CAMs (content addressable memory).

PROJECTS

MeetUp (view here) *React, React Native, Tailwind CSS, Convex, Clerk, Google/Outlook Calendar API*

- Developed cross-platform application directly integrating calendar accounts (Google, Outlook, etc.) simplifying scheduling.
- Implemented grouping functionality to provide support for dynamic scheduling, with unified profile to accelerate setup.
- Secure user authentication with Google and Apple using Clerk alongside combined backend and database through Convex.
- Designed privacy features to configure the level of data shared by each user, adjustable for different groups.

SmartStudy (view here) *React, Node.js, MongoDB, Vercel, Tailwind CSS, Axios, FastAPI*

- Built full-stack web application allowing users to upload materials and generate 5+ types of study content with React/Node.
- Integrated MongoDB and bcryptjs for secure user authentication and file storage to organize, preserve, and edit study materials.
- Developed FastAPI service running open-source LLMs, reducing model size by 20% through prompt engineering and chunking.
- Implemented Vercel for app hosting, securely exposing public features while protecting sensitive server-side information.

Home Lab *Debian, SSH, Tailscale, Docker, CasaOS*

- Designed fully functional home server for 20% of the cost of commercial products utilizing headless Debian Linux system.
- Configured remote access to the server with Tailscale VPN, allowing for access to network-attached storage and access to other devices on the network, also establishing a secure exit node for secure browsing on unprotected public networks.
- Implemented user-friendly web UI, allowing for account-based access to various web applications hosted by docker containers.

EXTRACURRICULARS

narbhacks, *Hackathon*, Remote July 2025

Duke Catalyst, *Pre-professional Tech Society*, Durham, NC Jan. 2025 — Present

Duke Applied Machine Learning, *Hardware Divison*, Durham, NC Sep. 2024 — Dec. 2024

Duke Dhamaka, *Treasurer*, Durham, NC Sep. 2024 — Present

Joint School of Nanoscience and Nanoengineering, *Research Intern*, Greensboro, NC Jul. 2023 — Jan. 2024

SKILLS

Programming Languages: Java, Python, Javascript/Typescript, C, C++, HTML/CSS, MIPS
Technologies: React/Next.js, Tailwind, Node.js, Docker, MongoDB, Firebase, Tailscale, Axios, Vercel, AWS, Selenium
Skills: Data Structures & Algorithms, Git/Github, Machine Learning, Embedded Systems, System Design