Nathnael Tesfaw

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Education

Cornell University, College of Engineering **May 2027**

Degree: Bachelor of Science, **Major:** Computer Science, **Minor**: A.I, **GPA**: 3.5

Related Courses: Object-Oriented Programming & Data Structures, Intro to Backend Development, Discrete Math, Digital Logic & Computer Organization, Intro to Analysis of Algorithms, Embedded Systems, Intro to Cybersecurity.

Coding Skills

Python, Java, HTML/CSS, Next, Dart, Flask-SQL, Node, Express, RISC-V, C, Verilog, PostgreSQL, Git, Firebase, Docker, Google Cloud Services, Heroku, Vercel, MongoDB, Supabase, Azure Labs, AWS, Numpy/Pandas, Nginx, Flutter

Experience

Carnegie Mellon University Pittsburgh, PA

Software Engineering Research Intern May 2025 – Present

- Developed an **AI-driven** cybersecurity chatbot **extension and app** using **GPT-4** to deliver personalized answers.
- Evaluated **6,000+ AI responses** using **NumPy/Pandas** and **GPT-4** to tune prompts for optimized performance.
- Built **HTTPS API** gateway on **AWS EC2**, using **Nginx** reverse proxy and **DuckDNS** for secure backend hosting.

[Hack4Impact Cornell](#) Ithaca, NY

Incoming Technical Lead / Product Manager on ReThink:Food August 2025 – Present (Expected)

- Lead **a team of developers** to create a **webapp** for a non-profit that delivers meals to food-insecure communities

Software Developer on Greenzone January 2025 – May 2025

- Built a **web-app** to deliver data that secures the livelihoods of **300,000+ herders** and their livestock in Mongolia.
- Engineered **data retrieval and modification** functionalities for map data using **Supabase** and **PostgreSQL**.
- Established robust **API-Routing** from backend to the **Next.js** frontend using **Node.js** and **Express.js**.

Software Developer on OKB-Hope September 2024 – December 2024

- Developed a **web platform** that connects **10000+ of Ghanaians** to vital mental health resources.
- Constructed and tested multi-file **upload and storage features** by integrating **Firebase** with the **Next.js** frontend.

Shady Grove Group LLC Silver Spring, MD

Part-Time Intern June 2021 – June 2023

- Contributed to an LMS that is used by **100+ at the company** and in Florida University Southeast (FUSE).
- Utilized **Flutter** for frontend and **Firebase** for the deployment, while using an **Agile** development framework.
- Optimized platform **functionality** through **testing** and key document uploads, enhancing usability and reliability.

Projects

[Workout Hub Website](#) Remote

Lead Developer July 2024 – Present

- Designed and developed a **full-stack website** to allow for **any number of users** to store and track their exercises.
- Built the frontend with **React**, the backend with **Node.js/Express**, and used **MongoDB** for data storage.
- Implemented **secure user authentication** using **JWT tokens**, tying accounts to user's email and password.
- **Deployed** the backend via **Heroku** and the frontend via **Vercel** for scalable hosting, accessibility and ease of use

[Lost and Found App](#) Ithaca, NY

Backend Developer April 2024 – May 2024

- Developed a Lost and Found **IOS Application** in **a team of 4** other students for an app creation competition.
- Designed and implemented the backend using **Flask-SQL** to handle **API-routing** for frontend requests.
- **Deployed** the backend via **Docker** on **Google Cloud Platform** for live accessing, testing and hosting.

Extracurriculars

CRU Cornell Ithaca, NY

Technology Team Lead August 2023 – Present

- Led the creation **of audio-visual content** for weekly club gatherings attended by **100+ active members**.
- Aided in the **organization and structure** of the weekly club gatherings through weekly leadership meetings.

Hamlin Fistula Hospital Addis Ababa, Ethiopia

Assistant Receptionist and Rehabilitation Aid July 2022 – Aug 2022

- Worked with **managing patient and employee data**, ensuring reliable registration for the **100+** of registrar users.
- Aided the rehabilitation team in **providing skills** and vocational training to women recovering from surgery