

Brhane Giday

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SUMMARY

Software engineer with 5+ years of experience in fullstack development, DevOps, and cloud-native solutions. Skilled in architecting and delivering scalable applications, building CI/CD pipelines, and optimizing system performance. Strong background in React, Next.js, Node.js, TypeScript, Kubernetes, and AWS, with proven ability to lead cross-functional teams and drive innovation. Recent work includes research on Large Language Models at Carnegie Mellon University Africa, applying AI in healthcare technology.

EDUCATIONAL BACKGROUND

MSc in Information Technology

Aug 2023– May 2025

Carnegie Mellon University Africa (CMU-Africa), Kigali, Rwanda

At CMU-Africa, I focused on software engineering, DevOps, and AI with an emphasis on software design, architecture, and scalable systems. My coursework and projects explored distributed systems, cloud-native development, and applied machine learning, combining both research and hands-on practice.

Bsc in Electrical and Computer Engineering

Sep 2014– Jul 2019

Addis Ababa University, Addis Ababa Ethiopia

Specialized in Computer Engineering, with a strong foundation in computer programming, computer architecture, digital logic design, and compilers. The program was highly technical, preparing me with both low-level systems knowledge and practical software development skills.

PROFESSIONAL EXPERIENCE

Research Associate – Upanzi Network, CMU-Africa | Kigali, Rwanda

Jan 2025 – Present

- Conducting research on LLM-powered policy and healthcare data analysis.
- Designed AI pipelines to process heterogeneous datasets across Africa.
- Collaborating with policy experts, researchers, and engineers to create usable AI tools.

Frontend Engineer – Better Mobile Security (Remote, USA)

Sept 2022 – Aug 2024

- Led frontend team for large-scale apps using React, Next.js, and TypeScript.
- Developed secure dashboards and optimized performance for thousands of users.
- Integrated CI/CD workflows and mentored junior engineers.

Frontend Engineer – DoubleDice (Remote, Belgium)

Mar 2022 – Sept 2022

- Built Web3-enabled interfaces with Next.js, Redux, and wallet integrations.
- Improved scalability and optimized user experience.

Frontend Developer & UI/UX Designer – MAD Technologies, Ethiopia

Sept 2020 – Oct 2021

- Delivered client websites using WordPress + custom React components.
- Designed intuitive user interfaces in Figma & Adobe XD.

Team Lead & Frontend Engineer – North Computing Group, Ethiopia

Nov 2019 – Aug 2020

- Led small engineering team to deliver enterprise web solutions.
- Focused on scalability, responsiveness, and usability in UI delivery.

PROJECTS

Curricula – AI-Powered Academic Advisor

Fullstack Engineer

- Built an AI-powered platform to help students plan academic paths aligned with career goals.
- Designed **recommendation engine** parsing university catalogs with LLMs.
- Developed frontend (Next.js) and backend (Node.js, MongoDB) with CI/CD pipelines.
- Implemented advisor workflows for students and faculty.
- Platform incubated at CMU-Africa's **Industry Innovation Lab**.

Salon Management System

Frontend Engineer

- Designed the **UI/UX** and implemented frontend in **React & TypeScript**.
- Built features for booking, staff management, and salon operations.
- Collaborated with backend team to integrate APIs for scheduling & payments.

AI-Powered Policy Analyzer for Africa

Frontend Engineer

- Designed a sleek, professional UI to make complex policies accessible.
- Integrated an AI chatbot powered by LLMs for interactive policy Q&A.
- Ensured responsive design and smooth API integration for user experience.

LLM-Based Healthcare Data Harmonization

AI Engineer

- Developed a system using Large Language Models to harmonize fragmented healthcare datasets
- Built pipelines to unify terminology, formats, and missing data handling.
- Enabled researchers and policymakers to query healthcare data more efficiently.
- Designed frontend tools for easy visualization and backend APIs for scalable access.

StayHub – Property Booking Platform

Fullstack Engineer

- Architected and developed an end-to-end platform for property rentals.
- Built frontend with Next.js + Tailwind, backend with Node.js + PostgreSQL.
- Implemented CI/CD pipelines, Docker containerization, and deployment.

Customer Support AI Chatbot for Ethiopian Airlines

AI Engineer

- Built AI chatbot with RAG pipelines to provide real-time answers to customer queries.
- Integrated LLM with airline-specific datasets (fares, schedules, policies).
- Designed scalable web app (Next.js + Node.js) with secure backend APIs.

Role-Based Event Management System

Frontend Engineer

- Built role-based access UI for event creation, booking, and management.
- Developed reusable React components with Material-UI & Tailwind.
- Ensured smooth API integrations and responsive design.

Open Data Portal

Frontend Engineer

- Designed and built a platform for researchers to upload, manage, and share datasets
- Implemented dataset validation, metadata entry, and preview tools.
- Developed UI with React, Next.js, and TypeScript, ensuring accessibility and performance.

SKILLS

- **Languages & Frameworks:** TypeScript, React.js, Next.js, Node.js, Python, GraphQL, Java, C++
- **Cloud & DevOps:** Docker, Kubernetes, Terraform, GitHub Actions, AWS (Certified CCP), Linux (CompTIA+)
- **Databases:** MongoDB, PostgreSQL, MySQL
- **AI & ML:** LLM-powered applications, RAG pipelines, OpenAI APIs, FastAPI
- **Design & Tools:** Figma, Adobe XD, WordPress, Webflow
- **Core Competencies:** Fullstack Engineering, DevOps Automation, Software Architecture, CI/CD, Technical Leadership

INTERESTS & ACHIEVEMENTS

- Founded **Bash & Beyond**, a YouTube channel teaching Linux & DevOps through real-world scenarios.
- Passionate about **AI for social good**, building tools for education, policy, and healthcare.
- I enjoy mentoring and leading small developer teams.