

SAMUEL HAILEMARIAM SEIFU

Full-Stack Software Engineer - Web Applications & AI/RAG Systems

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SUMMARY

Full-stack engineer since 2022 building production ERP, analytics, and operational platforms end-to-end — architecture, backend, frontend, and database design. Currently sole engineer designing a company-wide ERP from scratch for a large international construction and engineering firm. MSc in Artificial Intelligence; diagnosed and fixed a chunking-related retrieval failure in a RAG/analytics system through systematic debugging. Comfortable owning a system with no inherited codebase and no team, from data model to deployment.

TECHNICAL SKILLS

Backend: Django, FastAPI, Node.js, Express.js, NestJS, REST APIs, JWT & role-based authentication

Frontend: React.js, Next.js, TypeScript, JavaScript, Tailwind CSS

Databases: PostgreSQL, MongoDB, SQL optimization, relational schema design

AI/ML: RAG pipelines, LLM application integration, data analysis

DevOps: AWS (EC2, S3), Linux, Docker, Git/GitHub, Redis

PROFESSIONAL EXPERIENCE

CRCC International Consulting (Ethiopian branch) - Software Engineer (ERP Developer)

Jun 2026 – Present

- Sole engineer designing and building a company-wide ERP system from the ground up for one of the largest construction and engineering companies operating in Ethiopia and internationally, with no inherited codebase and no engineering team.
- Designing the system to serve 200+ users across 8+ organizational tiers and 40+ distinct roles, with full role-based workflow control.
- Own full architecture and development across 6 core modules: Project Management, Subcontract Management, HR & Payroll, Client Management, Procurement, and Authentication & Authorization.
- Responsible for every layer of the system: database design, API architecture, frontend delivery, and AWS deployment (EC2, S3).

Mizan Institute of Technology - Software Engineer & Lead, Digital Services

Nov 2025 – Jun 2026

- Owned and developed a stock management system designed to scale across organization sizes, from small shops to large enterprises, using an EAV (Entity-Attribute-Value) database design to support varying product attributes without per-client schema changes.
- Built full-stack client solutions using Next.js, Django, and PostgreSQL. Later led a small newly formed digital services unit through proposal writing, delivery, and invoicing.
- Taught applied programming, data analysis, and introductory machine learning to working professionals.

Early Start IT Solution PLC - Co-Founder, Full Stack Developer & Technical Instructor

Sep 2022 – Jul 2025

- Built and delivered 20+ business websites and internal systems with responsive React/Tailwind frontends and Node.js, Express, MongoDB, and SQL backends.
- Integrated front-end and back-end into seamless full-stack solutions; optimized performance, scalability, and security across deliveries.
- Led cross-functional development efforts and mentored junior developers.

YolkWorks - Software Engineer (US Remote Freelance, part-time)

Jul 2024 – Feb 2025

- Partnered with 5+ charity organizations to build and grow their online presence, delivering websites and software applications focused on UX, performance, and branding.

xHub Addis - Full-Stack Developer

Oct 2022 – Apr 2023

- Built a full-stack HR management system (React/Bootstrap, Node.js, Express, SQL, MongoDB) following clean architecture principles for scalable, maintainable code.

SELECTED PROJECTS

Higher Education ERP System - Django · PostgreSQL · Role-based Workflows

- Academic/admin ERP with role-based access, multi-step approvals, and reporting interfaces.

InsightAI - AI-Powered Analytics Dashboard - Next.js · Django · PostgreSQL · Redis

- Diagnosed and fixed a chunking-related retrieval failure in a RAG/analytics stack through systematic debugging; full-stack platform with secure APIs, KPI dashboards, and async background processing.

Inventory Management System (InvenTrack) - Next.js · TypeScript · Supabase (PostgreSQL)

- RBAC, transaction workflows, stock tracking, and reporting; live demo available.

Fleet Management Dashboard - React · API Service Layer · Charting

- Operational interfaces for vehicle tracking, maintenance, fuel, and reporting; live demo available.

EDUCATION

Addis Ababa University - MSc in Artificial Intelligence, GPA 3.94/4.0

Addis Ababa Science and Technology University - BSc in Software Engineering, GPA 3.77/4.0