

TEBAREK SHEMSU

Software Engineer

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EDUCATION

BSc. Software Engineering

Addis Ababa Science and Technology University

Nov 2022 – Jun 2026

Addis Ababa, Ethiopia

EXPERIENCE

Full Stack Developer

AAIASHC

Jan 2026 – Present

Addis Ababa, Ethiopia

- Architected and implemented a secure, self-hosted internal communications platform and a large-scale e-Management public service delivery platform for institutional workflows and citizen services.
- Designed shared data contracts (TypeScript domain models, Zod schemas, RPC/WebSocket payloads) as a single source of truth across Next.js and NestJS services in a Turborepo monorepo, eliminating cross-service validation mismatches.
- Orchestrated a multi-platform frontend (Next.js, React, Tauri desktop, TanStack Start) supporting **80+** routes, with RBAC, E2EE messaging, real-time delivery (Socket.IO/LiveKit), and BullMQ/Redis background processing.

Full Stack Developer Intern

Digital Addis

Aug 2025 – Oct 2025

Addis Ababa, Ethiopia

- Designed and launched SurveyHub and CTI Events, web platforms adopted by multiple organizations to manage surveys and events at scale, with optimized backend queries and caching in NestJS/Prisma.
- Implemented role-based authentication and transactional operations, ensuring secure, reliable data handling.
- Integrated QR-code registration, real-time notifications, and automated status updates, reducing repetitive tasks for event staff and administrators.

Full Stack Developer Intern

Conquer Agency

Feb 2025 – Aug 2025

Addis Ababa, Ethiopia

- Built Tigat.net, an online learning platform used by a large base of learners, supporting smooth video streaming and resumable uploads for heavy course content.
- Enhanced authentication reliability and API throughput, improving the overall learning experience for end users.
- Collaborated with a cross-functional team of developers, delivering production features consistently within sprint timelines.

PROJECTS

E-Learning & Mentorship Platform | *React.js, Node.js, Express.js, TypeScript, MongoDB*

- Contributed across the frontend and backend of a MERN-stack e-learning and mentorship platform, covering course management, dashboards, and video delivery.
- Implemented resumable, high-performance video uploads using the TUS protocol, and modularized backend controllers with role-based authentication to fix a critical admin-registration vulnerability.

Event Management Platform | *Next.js, React, TypeScript, PostgreSQL, Prisma, MinIO*

- Spearheaded a full-stack event platform streamlining event creation, custom registration flows, and attendee tracking.
- Developed **15** RESTful API routes (Next.js App Router) covering event CRUD, real-time analytics, galleries, and bulk registrant messaging.
- Engineered a dynamic form-building engine on a normalized PostgreSQL/Prisma schema across **11** relational tables for custom, per-event registration fields, with an automated QR-code check-in system and role-based admin access control.

Survey & Data Collection Platform | *NestJS, Prisma, PostgreSQL, Docker, Chapa API*

- Implemented backend features for a survey and data-collection platform with **3** distinct user roles (Admin, Creator, User), enabling targeted demographic research and automated participant rewards.
- Developed **25+** RESTful APIs with NestJS and Prisma, and designed a digital wallet ecosystem with the Chapa payment gateway for secure creator funding, participant withdrawals, and webhook-based transaction verification.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, C++, Python

Frameworks: Next.js, React.js, Node.js, Express.js, NestJS, Better Auth

Databases: PostgreSQL, MongoDB, MySQL

Tools: Git, Docker, Apache Kafka, Redis