

HAYLEMICHAEL TSEGA

Senior Backend Engineer • Distributed Systems • FinTech • Cloud

remantsega@gmail.com | +251 947 731 212 | Addis Ababa, Ethiopia | [linkedin.com/in/haylemichael-tsega](https://www.linkedin.com/in/haylemichael-tsega) | haile-dev-portfoli.vercel.app

PROFESSIONAL SUMMARY

Senior Full-Stack Engineer with 5+ years of production experience architecting high-throughput distributed systems, real-time financial platforms, and cloud-native micro-services. Specialized in Node.js, TypeScript, and AWS server-less infrastructure, with a proven track record delivering mission-critical Fin-tech systems including automated reconciliation engines, payment gateways, and banking platforms serving 150,000+ customers in regulated, high-compliance environments. Experienced educator and technical mentor with hands-on experience coaching aspiring developers. Deep expertise in event-driven architecture, Redis-backed performance optimization, multi-tenant SaaS design, and secure API development aligned with financial data security standards.

PROFESSIONAL EXPERIENCE

EagleLion System Technology

Feb 2025 – Present

Senior Full-Stack Engineer • Addis Ababa, Ethiopia

Banking Super App — Serverless Cloud Infrastructure

- Architected a production-grade serverless back-end on AWS Lambda and API Gateway supporting a primary banking Super App with 500K+ active users, designing provisioned-concurrency allocation and connection-pooling strategies to sustain sub-150ms P99 response times during peak load spikes of 8,000+ concurrent requests per second
- Engineered real-time event processing pipelines in Node.js and TypeScript to ingest, validate, and route high-frequency financial webhooks and transactional data streams, reducing end-to-end event propagation latency by 60% through batching and async queue optimizations
- Optimized AWS Lambda cold-start behavior through dependency tree pruning and provisioned concurrency configuration, eliminating 2.8 seconds of initialization overhead from latency-critical payment event flows and reducing cold-start frequency by 74%

Internet Banking & Post Office Agency Banking Platforms

- Engineered 65+ RESTful API endpoints in Node.js, Express, and TypeScript supporting core internet banking operations for 150,000+ active customers, maintaining strict compliance with PCI-DSS-aligned data security and input validation standards
- Designed and deployed an Automated Reconciliation System synchronizing real-time transaction balances across 280+ post office agency nodes nationwide, eliminating manual reconciliation errors and reducing end-of-day settlement cycle time by 78%
- Integrated Redis distributed caching layers across high-frequency query paths, reducing primary PostgreSQL load by 72% and improving average API response time from 680ms to 140ms during peak banking hours

Independent Full-Stack Developer (Freelance)

Jan 2024 – Present

Full-Stack Engineer • Addis Ababa, Ethiopia

Addis Bike Sharing Platform — Real-Time Mobility System

- Designed an event-driven geolocation ingestion engine in Node.js to process high-frequency GPS coordinate streams and enforce dynamic geofencing rules across 400+ active vehicles, tracking 5,000+ daily trips with zero-downtime real-time operations
- Built a React and TypeScript administrative dashboard with live map rendering and real-time state synchronization via WebSocket connections, enabling fleet operators to monitor vehicle status at 2-second refresh intervals with sub-500ms update latency
- Optimized front-end state management architecture using memorized selectors and normalized data structures, reducing redundant re-renders by 62% and delivering smooth live map updates across concurrent operator sessions

Multi-Tenant SaaS Management Platform

- Architected a secure multi-tenant backend from scratch using Node.js, Express, and PostgreSQL with row-level tenant isolation and scoped access-control policies, supporting 18+ enterprise clients on shared infrastructure with zero cross-tenant data leakage incidents across all production deployments
- Engineered a custom task scheduling engine and React/Next.js powered admin dashboard enabling automated workflow execution, reducing manual administrative overhead by 22 hours per week across client accounts and eliminating scheduling errors entirely
- Secured all tenant API endpoints with JWT based authentication, role-based authorization middleware, rate limiting, and input sanitization achieving clean results across 100% of penetration test checkpoints

Addispay Financial Technology

Jan 2024 – Feb 2025

Full-Stack Engineer • Addis Ababa, Ethiopia

Addispay Payment Gateway & Financial Admin Dashboards

- Built full-stack transaction monitoring dashboards using React and TypeScript, enabling operations teams to track and action 35,000+ daily transactions with real-time status visibility from a single unified interface, reducing average transaction review time by 40%
- Secured payment gateway API endpoints with multi-layered middleware — JWT tokenization, HMAC request signing, rate limiting, and input sanitization — eliminating SQL injection and replay-attack vulnerability classes from all production endpoints
- Reduced front-end dashboard bundle size by 38% through code-splitting, lazy loading, and dependency pruning, improving Time-to-Interactive for operations staff by 2.1 seconds and cutting page load time from 4.8s to 2.7s on standard hardware

Code Jika

2022 – 2023

Code Coach & Technical Instructor • Addis Ababa, Ethiopia

- Mentored and coached 90+ aspiring software developers through structured web development curricula covering web programming fundamentals, HTML, CSS, JavaScript, and full-stack project architecture, achieving an 85% course completion rate
- Designed and delivered hands-on coding workshops and project-based learning modules, reducing average time-to-first-job-placement for graduates by introducing industry-standard Git workflows, code review practices, and agile development habits
- completely project based and provide internship opportunity for top students.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES2022+), SQL, Bash

Frontend: React.js, Next.js, Remix, Tailwind CSS, WebSocket (Client), REST / GraphQL Clients

Backend: Node.js, Express.js, Go, RESTful APIs, Microservices, Event-Driven Architecture, WebSocket Servers

Cloud & Serverless: AWS Lambda, Amazon API Gateway, Amazon S3, Amazon EC2, Amazon RDS, Serverless Framework

Databases: PostgreSQL, MySQL, MongoDB, Redis (Caching & Session Management)

DevOps & Tooling: Docker, Git / GitHub, CI/CD Pipelines, Linux

Architecture: Distributed Systems, Multi-Tenant SaaS, Event-Driven, Serverless, Microservices, API Gateway

FinTech Domain: Payment Gateway Integration, Automated Reconciliation, Agency Banking, Internet Banking, PCI-DSS Compliance

Education & Mentoring: Technical Curriculum Design, Code Coaching, 1-on-1 Mentorship, Workshop Facilitation

EDUCATION

Addis Ababa Science and Technology University (AASTU)

Addis Ababa, Ethiopia

Bachelor of Science in Electrical and Computer Engineering

Cumulative GPA: 3.81 / 4.00

University of the People

2019 – 2021

Associate of Science in Business Administration

Online | Accredited US Institution