Nahom Girma Woldemichael

SENIOR AI SYSTEMS ARCHITECT | FULL-STACK ENGINEER (TYPESCRIPT, PYTHON, RUST) | SENIOR FLUTTER DEVELOPER

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Addis Ababa, Ethiopia (Full Overlap with US EST and European CET Time Zones)

PROFESSIONAL SUMMARY

Senior AI Systems and Full-Stack Software Engineer with 5+ years of production experience architecting stateful multi-agent workflows, containerized LLM evaluation environments, high-concurrency microservices and offline-first Flutter applications. Proven track record of scaling fintech and EdTech platforms to 2,000+ active users, cutting LLM token overhead by 65% via multimodal RAG indexing and automating 80% of manual B2B operations. Adept at owning end-to-end system design, p99 latency optimization and CI/CD pipelines for distributed engineering teams.

WORK EXPERIENCE

NovaTech AI & Stealth Overlay

2024 - Present

Founder & Principal AI Systems Engineer

Remote

- Architected and launched Stealth Overlay, a low-latency desktop and web SaaS platform providing real-time contextual AI assistance during live technical workflows using streaming WebSockets and structured LLM outputs.
- Engineered custom Model Context Protocol (MCP) servers and stateful multi-agent orchestration pipelines using LangGraph, PydanticAI and FastAPI with deterministic human-in-the-loop rollback gates.
- Built automated LLM evaluation suites and regression verifiers across 500+ edge-case prompts, reducing schema validation failures to under 0.5% and cutting p95 response latency by 40%.
- Designed end-to-end operational workflow audits and custom AI automations for B2B clients, integrating PostgreSQL vector stores, Stripe billing and containerized Docker deployments.
- Skills: TypeScript, Python, Rust, Next.js, FastAPI, LangGraph, PydanticAI, Model Context Protocol, PostgreSQL, pgvector, Redis, Docker, GraphQL, gRPC, Stripe and OpenTelemetry.

Rhobot Capitals

2023 - Present

Senior Full-Stack & Flutter Engineer

Remote

- Spearheaded mobile engineering for a cross-platform Forex trading companion application in Flutter and Dart, implementing clean architecture with Riverpod/BLoC, real-time financial telemetry and 60fps chart rendering.
- Co-architected and scaled the Rhobot Capitals Academy Learning Management System (LMS) to support 2,000+ active students with concurrent video streaming, progress tracking and role-based access control.
- Engineered automated CI/CD release pipelines using GitHub Actions and Codemagic, cutting build and deployment times by 50% while maintaining 99.9% production uptime.
- Developed algorithmic trading infrastructure in MQL5 (MetaTrader 5) using strict object-oriented risk management for automated XAUUSD execution.
- Skills: Flutter, Dart, Riverpod, BLoC, Firebase, WebSockets, SQL, GraphQL, MQL5, GitHub Actions and Codemagic.

Chiraro Digital Solutions

2021 - 2024

Full-Stack Web Application Developer

Remote

- Designed and delivered custom React, Next.js and Node.js web applications for enterprise and SMB clients, owning database schema design, REST API development and responsive UI implementation.
- Optimized full-stack query performance and frontend bundle sizes through PostgreSQL indexing, connection pooling and React code splitting, improving Core Web Vitals and page load speeds by 45%.
- Collaborated across cross-functional engineering and product teams using Git workflows, automated testing and agile sprint delivery.
- Skills: TypeScript, React, Next.js, Node.js, PostgreSQL, GraphQL, SQL, REST APIs, Docker, Git and CI/CD.

PROJECTS

OpenContext
Evidence-Linked Multimodal Video-to-Context Engine

Built an asynchronous pipeline that converts long-form video into timestamp-verified context packets for text-only LLMs, cutting prompt token consumption by 65%. Implemented automated citation verification and hybrid retrieval across multimodal transcripts and frame metadata.

Python, FastAPI, PostgreSQL, multimodal indexing and hybrid retrieval

FreightPilot
AI-Powered B2B Supply Chain & Fleet Routing Platform

Engineered a B2B logistics SaaS that automated 80% of manual dispatch data entry via structured document extraction.

React, FastAPI, PostgreSQL and machine learning route optimization

Nourish
Offline-First AI Nutrition & Health Platform

Co-founded and architected an offline-first nutrition platform featuring localized Ethiopian food database indexing, automated macro computation and sub-50ms local SQLite/Isar query sync.

Flutter, React Native, SQLite and Isar

Rhobot Capitals Academy & Trading Ecosystem
Learning Management System and Flutter Trading Companion

Co-engineered a high-concurrency LMS and cross-platform Flutter trading companion serving 2,000+ active users with real-time financial telemetry and role-based access control.

Flutter, Dart, Firebase, WebSockets and role-based access control

EDUCATION

Bachelor of Science in Computer Science University of the People — 2023 - 2025
Remote

Software Engineering Programme (12-Month Intensive) ALX-Africa — 2022 - 2023
Remote

Chemical Engineering Coursework Addis Ababa Science and Technology University — 2021 - 2025
Addis Ababa, Ethiopia

SKILLS

AI Systems & Agentic Infra: LangGraph, PydanticAI, Model Context Protocol (MCP), OpenAI / Anthropic / Gemini / DeepSeek APIs, Structured Outputs (Instructor, Zod), Multimodal RAG, Hybrid Search (BM25 + Dense Vectors), Cross-Encoder Reranking

LLM Evals & Post-Training: Automated Eval Harnesses (Promptfoo, Ragas), Containerized RL Environments, Pytest Verifiers, Pass@k Benchmarking, Hallucination & Latency Auditing

Backend & Distributed Systems: Python (FastAPI, AsyncIO, Django), Rust, TypeScript (Node.js, NestJS, Express), REST & GraphQL APIs, WebSockets, Server-Sent Events (SSE), Microservices

Frontend & Generative UI: React 19, Next.js (App Router, RSC), TypeScript, Tailwind CSS, Streaming Agent UI, State Management, WCAG Accessibility

Mobile & Edge AI: Flutter, Dart, Riverpod, BLoC, Offline-First Sync Engines (SQLite, Isar), Native Platform Channels (Swift, Kotlin), On-Device Quantized Model Inference

Databases & Cloud DevOps: PostgreSQL (pgvector), Prisma, Redis, Supabase, Firebase, Docker, GitHub Actions, Codemagic, Vercel, Render, Linux, Playwright, Vitest, Pytest