FIRAOL ABERA

Full-Stack & AI Solutions Engineer

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PROFESSIONAL SUMMARY

Performance-driven Full-Stack Software Engineer and AI Solutions Engineer with a proven track record of architecting high-concurrency real-time systems, scalable RAG (Retrieval-Augmented Generation) pipelines, and pixel-perfect digital experiences. Specialized in Next.js, Node.js, TypeScript, and AI-native workflows. Adept at transforming complex system designs and modern workflows into intuitive, production-ready applications engineered for maximum performance and fluid user experiences.

CORE TECHNOLOGIES & CAPABILITIES

- **Languages:** TypeScript, JavaScript, HTML5, CSS3, Go
- **Frontend:** Next.js (15/16), React, React Native, Tailwind CSS, Fluid UI/UX Design
- **Backend & Databases:** Node.js, Express, NestJS, MongoDB, PostgreSQL, Redis
- **AI & Real-Time:** RAG Pipelines, Local LLMs (Ollama), WebSockets (Socket.io)
- **DevOps & Tools:** Git, Docker, Linux/Ubuntu, Vector Databases, Clean Architecture (SOLID)

PROFESSIONAL EXPERIENCE

AI Solutions Engineer | Study Intelligence Platform
2026 – Present

- Architected and deployed an intelligent document analysis and summarization platform leveraging Large Language Models (LLMs) and a custom Retrieval-Augmented Generation (RAG) pipeline.
- Designed highly efficient context-retrieval mechanisms utilizing TypeScript to process complex unstructured data (PDFs/PPTs), converting them into structured, actionable insights.
- Optimized data processing layers to handle heavy document inputs with minimal latency, ensuring immediate interactivity and seamless user onboarding.

Full-Stack Developer | Digital Healthcare Portal
2026 – Present

- Designed the end-to-end architecture and intuitive UI/UX workflows for a comprehensive digital healthcare portal featuring automated appointment scheduling.
- Implemented an automated system for symptom pre-screening using Next.js, streamlining patient onboarding and reducing operational bottlenecks.
- Enforced rigid secure data handling, robust input validation frameworks, and clean modular application logic adhering strictly to SOLID principles.

Full-Stack Software Engineer | HUFEED (Campus Info & Feed System)
2025 – Present

- Engineered HUFEED, a high-concurrency, real-time campus information and feed web application optimized for localized university community interactions.
- Architected the robust platform backend using Next.js 15, Node.js, and MongoDB, integrating WebSocket technology via Socket.io to achieve low-latency, real-time data synchronization across active client sessions.

- Crafted a highly responsive, modern user interface featuring fluid state management and optimized loading speeds.

Frontend Developer | Green Pulse Platform

2025 – Present

- Structured and developed a web application focused on technical training modules and maintenance services.
- Translated highly complex technical and administrative workflows into an accessible, responsive user interface using React and modern utility-first CSS frameworks.
- Achieved optimized page-load speeds and highly intuitive navigation flow, maximizing user retention and platform accessibility.

PROJECT LAB & EXPERIMENTS

Lumière

- A premium full-stack e-commerce platform boasting a headless NestJS API backend paired with a highly optimized Next.js 16 storefront, implementing advanced field mapping, secure state management, and an ultra-responsive layout.

AI-Powered Study Intelligence Platform

- Engineered an advanced educational asset processing engine capable of digesting unstructured PDFs and PowerPoint presentations. Utilized localized large language models to instantly parse complex academic material, generating highly accurate, interactive summaries and structured study guides.

School Management System

- Designed and implemented a robust, full-stack educational administration portal engineered to streamline complex academic workflows. Features automated grading configurations, secure record management, and localized role-based access controls (RBAC) to ensure seamless communication and data handling.

EDUCATION

Bachelor of Science in Software Engineering

Expected Graduation: 2028

Focus Areas: High-Performance Architecture, Advanced Database Systems, Software Design Patterns (SOLID), Real-time Distributed Systems.