Bahaa Aldein Abdelbadie

Full-Stack Software Engineer

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SUMMARY

2 years of experience designing and shipping production web applications end-to-end — from backend architecture and API design to frontend delivery — across marketplace, EdTech, and enterprise SaaS domains.

EXPERIENCE

Full-Stack Software Engineer · Venustusy IT Solutions 10/2025 – 10/2026
Full-time · Remote

- Architected a marketplace backend from scratch: 100+ REST endpoints, dual-channel auth (phone + email OTP), payment gateway integration with refund logic, AWS S3 phase-based upload with rollback, Firebase FCM across 13 notification triggers, and race-safe concurrent order acceptance via SELECT FOR UPDATE
- Led full frontend development of an AI tutoring platform — custom SSE streaming client over ReadableStream for real-time AI responses, silent token refresh in Next.js Edge middleware, pure SVG data visualizations without a chart library, and 80+ components with bilingual Arabic/English RTL via next-intl
- Delivered a Next.js admin and vendor dashboard: server components with URL-driven filter state, TanStack Table with server-side pagination and sorting, and Recharts analytics across both portals
- Eliminated N+1 query anti-pattern in Elasticsearch inventory reporting using batch mget + Map lookups — **25× speed improvement** (5s → 200ms)
- Implemented Elasticsearch Painless scripting for nested urgency sorting and a Unit of Measure framework with dimension validation enforced at the API layer
- Built full test coverage for critical transaction flows — Jest unit and integration tests plus Playwright E2E — with an isolated Postgres test database and CI-ready config; verifies order status, totals, commission, and payout correctness

Freelance Full-Stack Software Engineer · Self-employed 10/2024 – 10/2025

- Built an AI-powered SaaS chatbot platform: knowledge ingestion pipeline with vector embeddings and semantic search, embeddable RTL-ready chat widget with voice support, Stripe subscription billing — reduced chatbot response latency **25%** via Redis caching and query optimization
- Built a collaborative LMS with real-time document editing (Liveblocks), AI-powered bilingual quiz generation, and Stripe-powered course enrollment — improved average quiz scores **24%** and course completion rates **32%**

SKILLS

Frontend
- React
- Next.js
- TypeScript
- JavaScript
- Tailwind CSS
- Redux

Backend
- Node.js
- Express.js
- NestJS
- PostgreSQL
- MongoDB
- Prisma
- REST APIs

DevOps & Tools
- AWS S3
- Firebase
- Elasticsearch
- Docker
- Git
- GitHub Actions

Testing
- Jest
- Playwright
- Integration Testing

EDUCATION

Bachelor of Science in Electronics and Communications Engineering 10/2020 – 07/2025
Mansoura University