# Abdo Tamim

## Full-Stack TypeScript Engineer | Next.js · React · AI / LLM Integration · Smart-Home Integration

Cairo, Egypt (remote) | abdotamimaaltaher@gmail.com | +20 115 509 7506 | tamim.works/work

## Professional Summary

Full-stack engineer shipping production web applications since 2021. Builds Next.js (App Router) and React applications in TypeScript end to end, from UI architecture and Tailwind design systems to APIs, PostgreSQL data models, serverless functions and deployment. Integrates LLMs into real product features: real-time voice agents, evaluators with schema-validated output, grounded RAG on pgvector, tool-calling assistants and multi-provider fallback with cost controls. Background in e-commerce (Shopify, WooCommerce, Salla) and conversion tracking (GTM, Meta Pixel, GA4).

Works AI-first every day: plans, builds, reviews and tests with Claude Code and Codex (custom skills, MCP servers, sub-agents and multi-step workflows), writes clear specs for the agents, and verifies every change with types, tests and real runs before it ships. Also building a second track in home automation and IoT integration (Home Assistant, ESPHome, MQTT, Zigbee, Modbus).

## Technical Skills

**Frontend:** Next.js 15/16 (App Router, route groups, layouts), React 19, TypeScript, Tailwind CSS 3/4, Framer Motion, reusable component systems, responsive and cross-browser UI, bilingual Arabic/English RTL interfaces, Figma to code, WebGL.

**Backend & data:** Node.js, Express, REST APIs, WebSockets, PostgreSQL, Supabase (Auth, Row Level Security, migrations), pgvector, Drizzle ORM, Redis, SQLite, JWT auth, webhooks, scheduled workers, Laravel, PHP, Python.

**Serverless & cloud:** Cloudflare Workers + KV, Cloudflare Pages, Vercel, Google Cloud (Vertex AI), GitHub Actions CI/CD, Sentry.

**AI / LLM:** Gemini API and Gemini Live (real-time voice), Vertex AI, OpenRouter, OpenAI API, Groq (Whisper), embeddings and RAG, function / tool calling, structured JSON output with validation, provider fallback chains, usage metering and budget gates, MCP servers.

**AI-assisted engineering:** Claude Code (skills, MCP, sub-agents, workflows), Codex CLI, spec-first prompting, agent output review, automated verification with Vitest and Playwright.

**Marketing & e-commerce:** Google Tag Manager, Meta Pixel, GA4 event tracking, Meta Graph API automation, Shopify (Liquid, Storefront and Ajax APIs), WordPress / WooCommerce, Salla.

**Home automation & IoT:** Home Assistant (automations, templates, dashboards), ESPHome, Node-RED, YAML and Jinja2, Zigbee 3.0, Matter/Thread, MQTT, Modbus RTU/TCP, sensors, relays, lighting and HVAC integrations, C++/Arduino, networking fundamentals (IoT VLANs, PoE, addressing), commissioning documentation; KNX/ETS in training.

**Quality & tooling:** Vitest, Playwright, Git, code review, performance profiling, technical handover.

## Professional Experience

**Independent Full-Stack Engineer** | tamim.works | 2021 – Present

Designs, builds, deploys and maintains web applications end to end for clients and own products. Selected work:

**Signature Platform** — *B2B SaaS for real-estate sales training · Next.js 15, TypeScript, PostgreSQL / Supabase, Gemini*

- Built an AI buyer that sales reps practise calls against: real-time voice over Gemini Live (WebSocket) plus text chat.
- Built an AI evaluator that returns schema-validated JSON scores backed by transcript evidence; invalid output never reaches users.
- Built a multi-tenant CRM: multi-step CSV lead import (upload, mapping, review, confirm), phone normalization, pipeline stages and routing rules with a simulation mode.
- Per-account retrieval with PII scrubbing and isolation checks; budget gates, usage metering, provider health checks and graceful fallback when the AI provider fails.

**Signature** — *live online course platform · Next.js 16 (App Router), TypeScript, Supabase, Tailwind*

- Built the learner dashboard, course and lesson flows, certificates and checkout with an Egyptian payment gateway, plus transactional email.
- Admin panel for analytics, payments, refunds, support tickets, audit logs and monitoring; Sentry error tracking; Vitest and Playwright tests.

**Outfred** — *Arabic-first AI fashion app · TypeScript, Express, React / Vite, PostgreSQL + pgvector, Redis*

- Built a RAG stylist that answers only from products retrieved through pgvector (HNSW) search; product IDs the model invents are filtered out before reaching users.
- Added CLIP-based visual search, scheduled workers for catalogue sync, AI enrichment and embeddings, and multi-provider LLM fallback (OpenRouter, Vertex AI, Gemini).
- Marketing automation on the Meta Graph API: scheduled Instagram/Facebook posting, comment auto-replies and comment-to-DM flows.

**AI automation, tools and storefronts**

- Chrome extension agent that reads incoming client requests, filters policy-violating ones and drafts replies with LLM safety gates (rate limits, human handoff, dry-run mode), backed by a Cloudflare Worker + KV cloud log and remote-command relay.
- Electron + React 19 desktop apps with Gemini function calling (writes require user confirmation), voice dictation and 109 Vitest tests.
- Next.js 15 + Supabase portfolio CMS (Row Level Security, 20 migrations) with a GitHub Actions pipeline that deploys client previews to Cloudflare Pages.
- Portfolio performance: found a 5.4 s main-thread stall caused by synchronous WebGL shader compilation and moved it to parallel compile on idle; DOMContentLoaded went from 5,468 ms to 58 ms.
- Shopify (custom Dawn-based theme), WooCommerce and Salla storefronts with GTM, Meta Pixel and GA4 conversion tracking; Arabic RTL throughout.

**Full-Stack Web Developer** | Mega Zone

- Developed web application features across frontend interfaces, backend logic, databases, reusable components, authentication flows and REST API integrations.

**Front-End Developer** | Bosta

- Built responsive interfaces for logistics workflows, operational dashboards and shipment journeys using API data, application state and form validation.

**Front-End Developer** | noon

- Developed mobile-first e-commerce interfaces for product discovery, product pages, cart and account journeys.

## Additional Experience

**Enterprise Technical Support** | Concentrix, VXI Global Solutions, Teleperformance

- Supported Expedia travel customers with reservations, ticket changes, itinerary updates, fare rules and refunds using Amadeus GDS.
- Handled AliExpress customer support in German by chat and email, resolving order, payment, return and dispute issues and documenting cases in CRM tools.
- Troubleshot Microsoft Windows activation and account issues, prepared technical tickets and escalated unresolved cases with clear notes.

## Training

- Networking fundamentals: CCNA curriculum coursework (not a CCNA certification).
- Microsoft 365 Fundamentals (MS-900 curriculum) and Power BI data modeling and DAX, Microsoft Learn.
- KNX/ETS fundamentals, currently in training.

## Languages

Arabic – Native | English – C1, professional | German – B2, spoken fluency developing