

Adham Batlouni

Full-Stack Engineer

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SUMMARY

Full-Stack Engineer with two years shipping production platforms in Next.js, React, TypeScript, and Supabase. Comfortable across the full stack, from PostgreSQL schema design and row-level security through to multilingual, performance-minded interfaces. Built and deployed several platforms end to end, including grounded LLM features engineered so the model cannot introduce bad data.

EXPERIENCE

Full-Stack Developer (promoted from Intern) | **Blockify Technologies** (Hybrid) May 2024 – June 2026

- Shipped **platforms end to end alongside the CTO** across three products, designing schemas and RESTful APIs with stable response contracts, then building the interfaces that consumed them.
- Built the client-facing platform for **A Plus, a Lebanese insurance brokerage**, spanning quote requests across eight coverage lines, claims support, and instalment-based payment plans.
- Built full-stack features for **Sandwalk**, a reward-based crowdfunding platform connecting creators with backers across the MENA region.
- Built an **in-house insurance management** platform as an installable PWA, defining the role and permission model across user tiers in coordination with leadership.
- Led the **migration of existing UI components to a standardized shadcn/ui library**, and optimized delivery through Redux Toolkit state management, code splitting, lazy loading, and incremental static regeneration.
- **Maintained code** quality through reviews and Jest unit testing, delivering sprint-aligned work through standups, planning, and stakeholder demos.

Full-Stack Developer Intern | **Techtalks** (Remote, Part-time) April 2026 – May 2026

- Built **Daleeli, a syndicate registration and labor rights platform**, giving Lebanese workers the exact documents and steps required to register with each syndicate, owning system architecture and core feature development in a five-person agile team.
- Implemented a **role-based access system across four user tiers** in Next.js, TypeScript, and Supabase, spanning public browsing, member accounts, and a full admin dashboard managing syndicates, news, and job listings.
- Engineered a **real-time multilingual news pipeline** in Arabic, English, and French, with automatic translation and parallel batch processing keeping announcements current across all three locales.
- Delivered a **premium contract review service** analyzing uploaded foreign work contracts to surface a worker's rights and obligations before they commit, shipped to sprint deadlines in a Jira and Git workflow.

Full-Stack Developer | **ETE-Services** (Remote) Feb 2024 – May 2024

- Built **full-stack features across the MERN stack**, including user authentication, dashboard analytics, and real-time data updates in React, Node.js, and MongoDB.
- Designed and optimized **RESTful APIs with Express.js**, improving data retrieval efficiency and keeping response times stable under concurrent load.
- **Centralized state management** with Redux to eliminate unnecessary re-renders, and partnered with QA to resolve critical bugs ahead of release.

SKILLS

- **Languages:** TypeScript, JavaScript, Python, Java, SQL
- **Frontend:** React, Next.js, Tailwind CSS, shadcn/ui, Framer Motion
- **State & Forms:** Redux Toolkit, Zustand, TanStack Query, React Hook Form, Zod
- **Backend:** Node.js, Express.js, REST APIs, Socket.IO, Supabase Edge Functions
- **Databases:** PostgreSQL (Supabase), PostGIS, MongoDB, MySQL
- **Testing & Tools:** Jest, Git/GitHub, Docker, Postman, Jira
- **Spoken:** Arabic (Native), English (Fluent), French (Beginner)

EDUCATION

Bachelor of Science in **Computer Science** – University of Balamand, Koura

2024

PERSONAL PROJECTS

Dawak (دواك) – Real-Time Medicine Availability Platform for Lebanon

- Built a **multi-sided platform for Lebanon's medicine shortage**, serving residents, pharmacists, and administrators, with the national pharmacy network pre-seeded from OpenStreetMap through idempotent imports that never overwrite a claimed listing.
- Engineered **trilingual, typo-tolerant search** on PostgreSQL trigram indexes over medicine names and curated aliases, resolving Arabic, French, and English queries (misspellings included), with real failed searches harvested into permanent aliases so the platform gets more accurate the more it is used.
- Architected **distance-ranked live availability** on PostGIS geography columns, returning pharmacy stock sorted by proximity from GPS or a saved home location, rendered in synchronized list and clustered map views.
- Enforced **authorization in the database rather than the client** through Row-Level Security, explicit grants, and security definer RPCs scoped to the authenticated user, with a data-trust layer above it: pharmacist-managed stock freshness, resident confirm/dispute verification with per-user trust scoring, and geo-matched restock alerts fired by pg_cron and Edge Functions that auto-pause after delivery.
- Implemented a **precision-first AI layer** (Groq, Llama 3.3 70B) that resolves zero-result searches and suggests same-ingredient equivalents, constrained by a confidence floor and a **code-level similarity guard** restricting output to real catalog entries, making hallucinated medicine names structurally impossible.
- **Technologies:** Next.js, React, TypeScript, Tailwind CSS, Supabase (PostgreSQL, PostGIS, pg_trgm, RLS, Edge Functions, pg_cron), Groq API (Llama 3.3 70B), Leaflet, Resend.

Mawed (موعد) – Real-Time Power Outage Intelligence Platform for Lebanon · Live Demo

- Designed and shipped a platform for the **rolling blackouts of Lebanon's national grid**, giving residents live grid status, 7-day outage forecasts, and configurable email alerts across 37 neighborhoods and 5 regions.
- **Owned the entire data** layer with no official API or public source, researching regional rationing patterns and modeling them into a normalized PostgreSQL schema with Row-Level Security on every table, maintained through a role-scoped admin panel with overlap detection that merges conflicting outage windows before saving.
- Engineered an **effective-schedule engine** resolving cancelled, modified, and added outage windows against recurring weekly baselines; the forecast grid, the email alert pipeline, and the preparedness checklist all consume it identically, guaranteeing one source of truth across every surface.
- Architected a **production alert engine** on Supabase Edge Functions and pg_cron, firing per-minute checks with a custom deduplication strategy ensuring exactly-once email delivery via the Resend API.
- Built an **LLM pipeline** (Groq, Llama 3.3 70B, structured JSON) converting unstructured trilingual announcements into normalized records, matching neighborhood names across Arabic, French, and English, and resolving relative dates to absolute, behind a strict no-write-access boundary: every output lands in an editable review grid for approval before reaching the database, with per-task temperature tuning (0.2 extraction, 0.7 generation).
- **Technologies:** Next.js, React, TypeScript, Tailwind CSS, Supabase (PostgreSQL, RLS, Edge Functions, pg_cron), Groq API (Llama 3.3 70B), Pigeon Maps, Resend.

Bet the Hand – Dynamic Mahjong Hi-Lo Betting Game · Live Demo

- Built and deployed a **betting game on a 136-tile Mahjong set** where Dragon and Wind tiles carry dynamic, history-dependent values that shift as the hand plays out.
- Architected a **fully decoupled, pure-function engine layer** (deck, hand, bet, and tile systems) with zero UI dependency, keeping game logic independent of rendering for maintainability and testability.
- Engineered a **state-synchronization system** propagating per-tile value changes across the live deck, discard pile, and reshuffles while preserving each tile's unique identity.
- Designed a **responsive, mobile-first interface** with fluid animations, polished touch interactions, and bet-feedback states across every stage of a round.
- Shipped it as an **installable PWA** with offline support through service workers, plus Open Graph metadata for link sharing.
- **Technologies:** Next.js, React, TypeScript, Zustand, Tailwind CSS, Framer Motion, Serwist (PWA).

Geo-Based Pricing POC

- Built an **interactive pricing management platform** where operators draw and edit delivery zones directly on a map, with pricing rules bound to each region.
- Enabled **dynamic zone creation and editing** with GeoJSON boundary detection, automated region mapping, and real-time pricing recalculation as inputs change.
- **Technologies:** React, TypeScript, Leaflet, Turf.js.

CERTIFICATIONS

- **Full-Stack Engineer Career Path** (Codecademy): Built end-to-end web applications with React, Node.js, Express, and PostgreSQL, covering REST APIs, authentication, and testing.
- **Python Developer** (Hyperskill / JetBrains Academy): Completed 15 projects and 274 topics spanning OOP, data structures, concurrency, networking, and web scraping, including a Redis-like TCP server.
- **Spring Boot Fundamentals** (Code with Mosh): Built RESTful backend services with Spring Boot, covering dependency injection, data persistence, and API design.
- **Django: Basics to Advanced**: Developed database-driven web applications with Django's ORM, authentication, and admin tooling.
- **Java Programming: Fundamentals to Advanced**: Covered OOP principles, collections, generics, and exception handling.
- **Data Structures & Algorithms**: Practiced arrays, stacks, queues, hash maps, trees, and algorithmic problem-solving in Java.