ALA BAGANNE

Full-Stack Software Engineer
Monastir, Tunisia | Open to relocation and remote roles
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SUMMARY

Full-stack software engineer who builds and maintains web and mobile apps with TypeScript, React, Next.js, React Native, Node.js and Python. Works on RetainYourBrain, an Alzheimer's prevention platform, across its web app, mobile app, APIs and AWS services. Builds AI features such as RAG search with cited answers, OCR pipelines and LLM workflows, and products for restaurants, online sales and job search. Looking for a product team where I can own features from the database to the release.

SKILLS

Languages: TypeScript, JavaScript, Python, SQL, PHP
Frontend: React, Next.js, React Native (Expo), Vue.js, Tailwind CSS, Electron
Backend: Node.js, Express, FastAPI, Laravel, Inertia.js, Laravel queues, pg-boss
Data: PostgreSQL (row-level security, pgvector), MySQL, Supabase, Drizzle ORM
AI: RAG, OpenAI and Claude APIs, Vertex AI, DSPy, Google Vision OCR, DeepL API, Whisper, AI SDK
Testing: Jest, Vitest, Cypress, Supertest, PHPUnit
Cloud & DevOps: AWS, GCP (Cloud Tasks, Pub/Sub), Docker, Nginx, Linux, GitHub Actions, Vercel

EXPERIENCE

Software Engineer | Retain Health, Inc. | Aug 2021 – Present

Boston, MA (Remote) | Contract

- Develop and maintain RetainYourBrain, an Alzheimer's prevention platform with 30,000+ signed-up users, across its web app, Node.js/Express API, MySQL database and AWS services.
- Built onboarding, routine tracking and account screens for the React Native/Expo rebuild of the user app.
- Built dynamic forms with conditional questions that set each user's routines and topic suggestions.
- Connected the APEX, TravaLab and FedEx APIs, with scheduled jobs that track lab orders, blood-draw appointments and kit deliveries and send status updates; fixed a failing Twilio job by sending messages in batches of 100.
- Built lab-results APIs and review screens, with checks against each clinic's reference ranges, for an internal tool that helps clinicians prepare patient summaries.
- Added unit, API and end-to-end tests (Jest, Supertest, Cypress) and GA4 analytics, and worked with QA and design on releases.

Tech: Next.js, AngularJS, TypeScript, Node.js, Express, MySQL, AWS, React Native, Expo

PROJECTS

Acta | acta.alabaganne.com

Python, FastAPI, Next.js, Supabase, pgvector, GCP, DSPy, DeepL

- AI document workspace for lawyers and notaries: upload a firm's documents, then ask questions in plain language.
- Built the RAG knowledge base: documents are split, embedded and stored for vector search, and every answer cites its sources.
- Built background document processing on Google Cloud Tasks and Pub/Sub, with Google Vision OCR so scanned PDFs follow the same path as text files, and DeepL translation between English, French and Dutch.
- Built Smart Processing, which learns from example inputs and outputs how to transform documents or pull out data such as parties, prices and dates, using LLM APIs and DSPy.

MenuMate | menumate.net

Next.js, TypeScript, Supabase, PostgreSQL, Vercel

- Built and launched QR menus and table ordering for restaurants, with a live dashboard where staff manage menus and receive orders; about 4 new sign-ups a day from SEO and social posts.
- Saved each order and its items in one Postgres transaction with client-generated IDs, so retries never create empty or duplicate orders; kept each restaurant's data separate with row-level security, checked by SQL tests.

Nextward | nextward.alabaganne.com

Laravel, Vue.js, Inertia.js, MySQL, OpenAI and Claude APIs

- Jobs and internships platform in two languages with 900+ live roles from 350+ companies, imported daily from five sources (Greenhouse, Lever, Ashby, Tanitjobs, Keejob).
- An LLM sorts listings by field, level, work mode and skills and flags likely scams for review, with keyword rules as a backup; 306 PHPUnit tests run on every push.

KartaTunisie | kartatunisie.com

Next.js, TypeScript, MySQL, Drizzle ORM, Nginx

- Built and launched a gift card and game credit store in French, English and Arabic that fulfilled 10+ orders in its first week.
- The server recalculates every order's price from the catalog, so buyers can't change it; 298 Vitest tests cover prices, payments and permissions; hosted on a Linux VPS with deploy scripts and nightly backups.

PromptStream | promptstream.alabaganne.com

Electron, React, TypeScript, Next.js, Whisper

- Dictation app for Linux and macOS: hold a key, speak, and clean text is pasted into any app; Whisper and an LLM run behind a Next.js API, with Wayland support.

EDUCATION

Engineer's Degree in Software Engineering | ISSAT Sousse

Achievements: 1st place, EPI competitive programming competition
Languages: English (Fluent) | French (Intermediate) | Arabic (Native)