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 and LLM document workflows, and has built and launched products for law firms, 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
Data: PostgreSQL (row-level security, pgvector), MySQL, Supabase, Drizzle ORM
AI: RAG, embeddings, OpenAI and Claude APIs, Tesseract OCR, DeepL API, Whisper
Testing: Jest, Vitest, Cypress, Supertest, pytest, PHPUnit
Cloud & DevOps: AWS, 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

Next.js, TypeScript, FastAPI, Python, PostgreSQL, pgvector, OpenAI API, DeepL

- Sole designer and developer of an AI workspace for notaries and law firms, in English, French and German: it answers questions about the office's documents, drafts from Word templates, and translates and anonymizes files.
- Built the RAG pipeline: files are read page by page, with Tesseract OCR for scans, split into passages and stored in pgvector; every answer cites its passages and opens the document at the cited page.
- Every database query runs as the signed-in user, so Postgres row-level security keeps each firm's files out of other firms' answers; long tasks run on a Postgres job queue with leases and up to three retries.
- Built Smart Processing, which learns an office's routine from a few before-and-after documents, writes the steps in plain words, checks them on the examples and returns Word files in the office's own layout; 400+ backend tests (pytest).

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.

Anywhere Jobs | anywherejobs.alabaganne.com

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

- Jobs and internships platform for IT roles in English and French, with listings imported daily from employer job boards (Greenhouse, Lever, Ashby, Workable, Recruitee) and Hacker News hiring posts; writes a tailored CV and cover letter for any role.
- An LLM reads new listings in batches of ten to set the field, level, work mode, skills and who can apply, with keyword rules as a backup, and checks each company's own website before its listings go live; 400+ PHPUnit tests run in GitHub Actions.

Karta Tunisie | 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)