

Aurel Atiokpe

Software Engineer · Mobile, Backend & AI

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PROFILE

Software engineer who takes products from design to production. Came to code through design, and still redesigns before building. Most recently lead developer and product designer of an AI tutoring app for students in francophone West Africa: 40+ React Native screens, 46 serverless functions, and answers checked against the official school curriculum. Writes things from scratch to understand how they work: an embedded database, an auth library, a ray tracer, a neural network.

SKILLS

Mobile & web: React Native, Expo, EAS, NativeWind, React, TypeScript, JavaScript, Vite, Astro

Backend & data: Supabase, PostgreSQL, pgvector, Deno Edge Functions, Upstash Redis, Appwrite, PocketBase

AI: Gemini API, embeddings, retrieval-augmented generation, response streaming, context management, safety safeguards

Security: JWT, rotating refresh tokens, OTP, bcrypt, Row Level Security, rate limiting

Product design: Figma, design systems, prototyping, user flows, UX/UI

Tooling: Git, GitHub Actions, CI/CD, Docker, SQL migrations, automated testing, Vercel

Languages: TypeScript, C, C++, Rust, Python, Bash, Haskell, GDScript

EXPERIENCE

Lead Developer & Product Designer

Open Rise SARL, Cotonou · April 2026 – August 2026

- Took an AI tutoring mobile app from concept to production-ready prototype with Expo, React Native and NativeWind.
- Built 40+ screens: onboarding, tutoring chat, revision with generated quizzes, gamified challenges and a parent dashboard.
- Designed a serverless backend on Supabase, PostgreSQL and 46 Deno Edge Functions that hold all of the business logic.
- Grounded answers in the official curriculum: Gemini embeddings and a pgvector search filtered by country, grade and track, behind a similarity threshold calibrated on real student questions.
- Streamed chat responses from the Gemini API with conversational context and prompt-misuse safeguards, and cached them with Upstash Redis to cut latency and API costs.
- Built the authentication: phone OTP, bcrypt-protected PINs, signed JWTs, rotating refresh tokens and rate limiting.
- Set up CI/CD across environments with versioned SQL migrations, EAS builds and automated tests.
- Led a cross-functional team of four, developers and a UI/UX designer: task coordination, code reviews and backlog prioritisation.

Freelance Product Designer

Open Rise SARL, Cotonou · November 2025 – March 2026

- Audited the existing product and redesigned its core user journeys and its full interface.
- Built a Figma design system with light and dark themes and a reusable component library.
- Worked directly with the product stakeholders, which led to taking over the product's engineering.

Teaching Assistant

Epitech Bénin, Cotonou · March 2025 – June 2025

- Mentored 100+ students through their technical projects: architecture guidance, follow-ups and code reviews.
- Took part in weekly engineering stand-ups, staff meetings and the summer university.

React Native Developer

TePlay, Cotonou · November 2024 – December 2024

- Developed a React Native app for a community sports platform.

UI/UX Designer

Cerberes Technologies, Cotonou · July 2024 – November 2024

- Delivered five projects from concept to developer handoff: an e-commerce platform, inventory software and three showcase websites.

IT Support Assistant

Epitech Bénin, Cotonou · April 2024 – June 2024

- Maintained the campus IT infrastructure, deployed workstations and configured developer environments.

PROJECTS

Full write-ups, code and demo videos at aurelatiukpe.tech.

- **SlimDB** · Rust · A crash-safe embedded database. A write-ahead log flushed on every write, checksummed records, torn writes truncated on recovery, and C ABI and Python bindings. A `kill -9` test loop runs 200,000 times a night.
- **revocable-jwt** · TypeScript · Stateless JWT auth that can actually be revoked, with zero dependencies: refresh-token rotation that holds up against concurrent reuse, OTP and rate limiting. Runs on Deno, Node, Bun and Cloudflare Workers.
- **Retsu** · C++17 · A ray tracer from scratch with its own scene format: analytic intersections, recursive reflection, supersampling, and an OpenMP render loop 4.4× faster on four cores. Lead developer in a team of three.
- **chess-nn** · C++17 · A neural network with no ML library that classifies chess positions into five states, from nothing to checkmate: 72.5% on 1,350 unseen positions. Network core and encoding in a team of three.
- **Games** · Godot 4 · Hypernova, an arena fighter; Hearthside, a cozy inn sim; Ronin, a samurai action prototype; and Magic Is a Zero-Sum Game, a Trijam entry. Also Knowledge Guardian, an educational quiz game made in a 72-hour jam.

EDUCATION

Bachelor in Computer Science, Software Engineering

Epitech Bénin, Cotonou · October 2023 – August 2026

Technical Diploma in Computer Installation & Maintenance

Lycée Technique Professionnel, Porto-Novo · September 2019 – May 2022

LEADERSHIP & COMMUNITY

President, Game Cloud · Epitech Bénin, 2025 · Led the school's game development society, ran workshops and mentored members on graphics engines.

Trainer, Beyo Taago · 2025 · Taught a one-week introduction to computer science to rural students, as part of a digital inclusion programme.

Speaker, CJL Kétou · November 2024 · Hosted a tech career conference for rural youth.

LANGUAGES

French · Native, TEF C2

English · Professional working proficiency, TEPitech 820/1000