

Firas Lamouchi

Systems-Minded Full-Stack Developer — DevOps & Cloud

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PROFILE

Full-stack developer with 4+ years of building and running production systems end to end. I'm the sole developer of EduQate (eduqate.qa) at JoyPix in Doha, covering web, mobile, infrastructure, security and Qatar PDPPL compliance. Previously co-founded SiccaDev, delivering 10+ client systems at 99.9% uptime. Open-source author and LangChain AI contributor, with a background in embedded C and logic design.

Core stack: NestJS • Rust • .NET/C# • Kotlin • TypeScript • React • PostgreSQL • Docker

EXPERIENCE

Software Developer, sole developer on the platform — JoyPix

Doha, Qatar • 04/2026 – Present

EduQate, live at eduqate.qa: three web apps and an Android/iOS app, 19 domain modules across 5 one-way layers

- **Frontend & mobile:** React 19 + Vite web apps and a React Native / Expo app built from Figma designs, sharing one design system and API client. Arabic/English with RTL; EAS builds and push notifications.
- **Backend & data:** NestJS on PostgreSQL (Prisma, pgBouncer) and Redis; transactional outbox so emails and notifications are never lost; a Rust image service that cut storage by 80% and made first load ~2× faster.
- **Infrastructure:** Docker on segmented networks behind Caddy and an outbound-only Cloudflare Tunnel; PM2 clustering; nightly offsite backups, restored and verified weekly; deploy runbooks and maintenance mode.
- **Local infrastructure:** on-premise environment on Proxmox and Incus (VMs and system containers), with CI workloads spread across several self-hosted runners.
- **CI/CD:** GitHub Actions gates every change on lint, typecheck, migration drift, a full-stack smoke test through pgBouncer and CodeQL/Trivy scans; deploys wait for a health check, scan every service's logs and email an alert on failure.
- **Testing & QA:** 7,000+ automated tests: Jest and Vitest unit/integration, Playwright end-to-end with axe accessibility and visual-regression checks, Stryker mutation testing, a regression test per production fix, smoke and data-safety checks, k6 load tests.
- **Security:** deny-by-default access, instant session revocation, refresh-token rotation with reuse detection, breach-list password checks, account lockout, Helmet/CSP/CSRF, Sentry monitoring.
- **Privacy (Qatar PDPPL):** self-service data export and deletion; deletion signs users out everywhere and survives backup restores; versioned consent; audited record views; PII scrubbed from error reports.
- 12 written engineering post-mortems on production failures and their fixes.

Full-Stack Developer (Part-time) — JDL

Remote • 04/2026 – Present

Client production system at jdl.net, alongside JoyPix: backend, infrastructure and several frontends

- Daily stack: .NET/C#, Next.js and Zod. .NET/C# microservices keep selected modules working offline.
- Client product under NDA, built with Angular, Kotlin and .NET/C#.
- Native Android development in Kotlin with Android Studio.
- Own the architecture, real-time behaviour and reliability of hardware deployed in the field.

Systems Developer / Operations Support — Ryde

Doha, Qatar • 11/2025 – 02/2026

- Operations support on a live ride-hailing dispatch queue: real-time optimisation, Docker monitoring and peak-traffic incident response.
- Tuned .NET backend APIs and database queries for lower latency and better data sync on a system designed by others.

Co-Founder & Lead Developer — SiccaDev (Startup)

Le Kef, Tunisia • 03/2024 – 08/2025

- Led 10 production web and mobile systems for 6 clients in tourism, agri-tech and e-commerce (React, Angular, React Native).
- Multi-tenant SaaS on PostgreSQL and MySQL with tenant isolation; offline-first sync for unreliable connections.
- AI-assisted analytics pipelines (Python ETL with on-prem Ollama), load-tested to ~2 GB per client per day.
- Ran infrastructure and releases for a 6-person team (VPS, Docker, CI/CD, Linux): 99.9% availability, 30–40% faster deploys.

Software Engineering Intern — Tunisian Cloud

Tunis, Tunisia • 06/2023 – 09/2023

- SQL query and indexing work for monitoring dashboards; backend APIs for infrastructure tracking on VMware/KVM.

Intern — Tunisie Télécom

Le Kef, Tunisia • 03/2023

- Networking fundamentals, server administration and IT systems maintenance in a telecom environment.

OPEN-SOURCE PROJECTS

- Ferry — Rust · Apache-2.0 · sole author

ferry.flamouchi.com · GitHub · Docker Hub · GHCR

Peer-to-peer file, secret and message transfer with no server or relay. 7 crates, 350+ tests; mDNS discovery, SPAKE2 pairing, Noise Protocol (XK) encryption, age-sealed payloads. Ships as a CLI, VS Code extension and Tauri desktop app. 316 Docker Hub pulls.
- Job Scraper 02 — Python · FastAPI + Streamlit · v0.3.0 on PyPI

Website · PyPI · GitHub

Ranks job listings 0–10 against your CV, keyless or with Groq, Anthropic or Gemini; it found me the JoyPix role. PyPI trusted publishing with a live-scrape release gate in CI. 321 GHCR pulls, MIT, 4 stars.
- OpenDerja_TN — NestJS · PostgreSQL · founder & maintainer

derja.flamouchi.com

Non-profit, regionally tagged corpus of Tunisian Derja (~12M speakers), with a lexicon and translator. Framework-free core, 11 NestJS modules, 42-model schema, pg-boss queue, 59 suites / 302 tests. Opening to contributors.
- Fira Sys — React 19 · MySQL · open source

firasys.flamouchi.com · GitHub

Restaurant POS, multi-location inventory, purchase orders and analytics; OCR plus an LLM read supplier invoices into line items. Rebuilt for the web from a Rust desktop app.
- WhatsApp Automation Tool — Python · Flask · v3.0.0

wa.flamouchi.com · GitHub · GHCR

WhatsApp outreach through a real browser in a container (Chromium + noVNC), no paid API. Campaign dashboard, dry runs, CSV import with phone validation, 4-language templates. v3.0.0 added CSRF/SameSite, tests 13 → 51 (~90% core) and a 5-stage CI.

OPEN-SOURCE CONTRIBUTIONS

LangChain AI · PostHog · storytold

SKILLS

Core	NestJS, Rust, .NET/C#, Kotlin, TypeScript
Frontend	React 19, Next.js, Angular, Vite, TanStack Query, Redux, Zustand, Tailwind CSS, shadcn/ui, Tauri, Figma, Arabic/RTL. Rendering chosen per feature: SSR, ISR, SSG or CSR, depending on the goal.
Mobile	React Native / Expo for Android and iOS (Android-focused), EAS builds, push notifications; native Android with Kotlin and Android Studio
Backend & APIs	REST, WebSockets/Socket.io, webhooks, microservices, transactional outbox, pg-boss queues, Resend email, payment gateways (Tap Payments, SkipCash, Fawran)
Data	PostgreSQL, MySQL, ClickHouse, MongoDB, SQLite, Redis, Prisma, Sequelize, pgBouncer, Cloudflare R2 / S3
Infra & DevOps	Docker & Compose, Proxmox, Incus, VMware/KVM, Linux, bare-metal & VPS, GitHub Actions, self-hosted runners with load distribution, GHCR & Docker Hub publishing, PyPI trusted publishing, Caddy, Traefik, nginx, Cloudflare (Tunnel, DNS, CDN), PM2, pnpm
Testing & QA	Jest, Vitest, Playwright, Stryker mutation testing, regression, smoke and data-safety testing, k6 load testing
Security & Privacy	JWT (jose), OAuth (Google, Apple, GitHub), Helmet, CSP/CSRF, rate limiting, deny-by-default access, Noise Protocol, Qatar PDPPL
Monitoring	Sentry (PII-scrubbed), PostHog, health checks, uptime monitoring
AI	LLM APIs (Anthropic, Groq, Gemini, Ollama) with Python, self-hosted DeepSeek on my own GPU server, LangChain, OCR pipelines; Claude Code and Cursor
Embedded	Embedded C, PIC microcontrollers, logic design, industrial automation
Ways of working	Code review, product design, Jira, Asana

EDUCATION

- Full-Stack Web & Mobile Development Diploma — ReBootKamp Tunisia

09/2023 – 04/2024

1000+ hour project-based programme: data structures, system design, production architecture, agile, CI/CD and DevOps.
- Baccalaureate, Technical Sciences — Le Kef, Tunisia

2018 – 2022 · Assez Bien

Calculus, linear algebra, Boolean logic, sequential circuits and embedded C (PIC).

LANGUAGES

Arabic — Native French — Fluent English — Fluent German — Conversational