

Bilel Zaaraoui

Full-stack & mobile architect developer

Design, industrialization and delivery of complete digital products

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PROFILE

Full-stack and mobile architect developer, I take ownership of complete digital products: web and mobile applications, backoffices, business APIs, realtime systems and production environments. I work from technical framing and architecture decisions through development, software quality and production delivery.

My background combines software development, systems and networking culture, and operational discipline shaped by my experience in the French Foreign Legion. This combination supports a demanding approach: autonomy, method, endurance and delivery responsibility.

KEY EXPERTISE

Product architecture & application design

- Translate business needs into coherent and scalable technical solutions
- Design architectures covering backend, web, mobile and backoffice
- Recover existing systems, reduce complexity and improve maintainability

Backend, APIs & realtime

- NestJS, Node.js, Java, Spring Boot
- Secure REST APIs, authentication, business workflows, notifications and advanced application logic
- Chat, WebSockets, multi-client synchronization, Prisma, PostgreSQL, PostGIS, Redis, MongoDB

Frontend, mobile & business interfaces

- React, Next.js, React Native, Flutter
- Android/iOS applications, professional web interfaces, dashboards and backoffices
- User journeys, business forms, complex states and responsive design

Quality, production & industrialization

- Testing strategies: unit, integration, E2E, Schemathesis, k6, ZAP, Stryker and smoke testing
- DTO / Swagger / validation hardening, regression control and sensitive module hardening
- Docker, VPS, production scripts, CI/CD, technical SEO and web performance

PROFESSIONAL EXPERIENCE

Full-stack web & mobile developer

Byrsa Tech

Permanent contract, full remote — Tunisia-based company | 2022 – 2025

Development and evolution of web, mobile and backoffice digital products for varied business needs, with strong autonomy on analysis, technical design and delivery.

- Designed and developed mobile applications, management platforms, admin dashboards, backoffices, APIs, SaaS solutions and business websites.
- Contributed to architecture choices and defined solutions adapted to functional, technical and delivery constraints.
- Built backend services in Java / Spring Boot, frontend interfaces in React and mobile applications in React Native.
- Handled significant scopes: functional breakdown, development, deployment, production bug fixes and evolutionary maintenance.
- Worked with stakeholders, clarified requirements and contributed to technical and functional documentation.

Volunteer Lead Developer

Socializus / P4W

Association | 2024 – 2025

Complete reconstruction of a multi-surface social platform to restore a coherent, maintainable and truly scalable application base.

- Recovered the product as a whole: Android/iOS mobile application, web and backend.
- Defined a target architecture to reduce technical dispersion and clarify application responsibilities.
- Developed and structured the main backend in NestJS.
- Worked on sensitive blocks: authentication, chat, notifications, realtime sockets and flow consistency between clients.
- Made technical trade-offs focused on maintainability, code readability, project continuity and small-team handover.

SELECTED PROJECTS

Basel / Luchtreiniger Pro

Multilingual business website, digital acquisition and production delivery

Design of a professional web ecosystem aimed at strengthening online presence, commercial credibility and qualified lead generation for a specialized brand.

- Multilingual Next.js frontend structured around SEO pages, editorial content, internal search, service pages, legal pages and conversion flows.
- NestJS backend and admin backoffice to manage contacts, quotes, applications, customer reviews, notifications, presence and operational tracking.
- Integration of public chat, human handoff flow, OpenAI module and rich media strategy with proof images and videos.
- Production deployment on VPS with Docker/Caddy, operations scripts, PageSpeed optimization, sitemap, robots, JSON-LD and traffic analysis preparation.

Glimpse

Mobile social platform under industrialization

Design of a complete mobile social platform based on a modular NestJS backend, with high expectations around business robustness, security and industrialization.

- Backend architecture covering complex domains: authentication, profiles, announcements, claims, realtime chat, notifications, geolocation, crossings and social interactions.
- Design of advanced product blocks: wallet, referrals, achievements, gamification, billing, webhooks, support, moderation, campaigns and audit logs.
- Persistence and geospatial logic with Prisma, PostgreSQL and PostGIS, preparing a multi-surface ecosystem: mobile, web, backoffice, media and infrastructure.
- Deep quality workflow: unit, integration, E2E, k6 performance, OpenAPI validation with Schemathesis, smoke tests, ZAP and Stryker mutation testing.

EARLIER BACKGROUND & DIFFERENTIATING PATH

IT and network maintenance technician

Independent activity, Marseille | 2012 – 2015

System diagnostics, IT maintenance, local networks, Cisco, Fortinet, routing and basic security.

Soldier

French Army, Foreign Legion | August 2006 – August 2012

Operational discipline, execution reliability, endurance and sense of responsibility.

EDUCATION

Master II — IT and information systems expert

AJC Formation | 2023 – 2024 | Level 7, equivalent to Bac+5

Web & mobile / full-stack developer

AFPA, Marseille | 2022 – 2023 | BTS-equivalent level

Python / Data Science developer training

Le Wagon, Marseille | June 2021 – September 2021 | Bac+3/4 level

Professional diploma in web and mobile development

WebForce3, Marseille | 2020 – 2021 | Bac+2 level

Higher studies in applied computing and applied sciences

ISET / INSAT, Tunisia | 2003 – 2005

TECHNICAL STACK

Backend & data : NestJS, Node.js, Java, Spring Boot, REST APIs, WebSockets, Prisma, PostgreSQL, PostGIS, Redis, MongoDB

Frontend & mobile : React, Next.js, React Native, Flutter, TypeScript, JavaScript, HTML, CSS

Quality & tests : Jest, unit tests, integration, E2E, Schemathesis, k6, ZAP, Stryker, smoke testing

Production & systems : Docker, VPS, shell scripts, deployment, Linux, Windows Server, TCP/IP, routing, Cisco, Fortinet

LANGUAGES

French : fluent / professional

Arabic : native language

English : upper-intermediate, B2