

Sidali Assoul

Software Engineer | Full Stack Developer | Master in Computer Science

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Summary

Full-stack engineer obsessed with understanding the core gist of your business before touching the keyboard. I build scalable SaaS platforms and AI microservices that stay stable in production—leveraging Clean Architecture, DDD, and high-performance engineering.

Experience

Full Stack Engineer (Freelance), Upwork Client – United Arabe Emirates (Remote) Jan 2024 – Jan 2026

- Architected a multi-tenant logistics hub (110+ model schema) enabling merchants to synchronize orders and providing shipping companies with dedicated tools to manage fulfillment
- Led a developer team of 4, conducted technical interviews, and performed code reviews across 2 production codebases
- Built an eCommerce sync engine (Shopify, WooCommerce); leveraged the Strategy pattern for pluggable, non-breaking store integrations
- Implemented financial infrastructure using Stripe Connect for merchant and carrier wallets, on-demand withdrawals, and automated payouts
- Tech stack: Laravel 12, Next.js 15, TypeScript, MySQL, Stripe API, Puppeteer

Backend Engineer, Addinfo – Paris, France (Remote) Apr 2023 – Nov 2023

- Architected a multi-tenant SaaS with a high-throughput NestJS core and multi-provider OAuth (Google, GitHub, GitLab, Azure)
- Designed a scan ingestion engine mapping complex JSON snapshots across 50+ relational tables with automated deduplication
- Built Git integrations (GitHub, GitLab, Azure) using OAuth and automated CI/CD workflow/secret injection
- Eliminated analytics latency from ~3s to <100ms by implementing Write-time Aggregation (Materialized View strategy) for high-volume statistics, while utilizing application-level caching and SQL query refinement.
- Integrated a real-time memory monitoring interceptor across all production endpoints to detect heap usage spikes, and personally resolved identified memory leaks after receiving automated alerts.
- Launched a standalone Certification Microservice featuring Stripe payment integration, LinkedIn OAuth, and a Puppeteer-based PDF generation engine for automated diploma issuance.
- Tech Stack: NestJS, TypeScript, PostgreSQL (TypeORM & Prisma), Supabase, React, Next.js, Docker, Stripe, Puppeteer, Cypress, GitHub/GitLab/Azure APIs.

Software Engineer, CreaTech dz – Algiers, Algeria Sept 2022 – Mar 2023

- Architected a multi-tenant Events Marketplace (NestJS, TypeScript, TypeORM, MySQL) with Twilio SMS-OTP onboarding, RBAC guards, partner approval workflow, and geo-tagged discovery for organizers and sellers.
- Built full revenue engine: Stripe webhook payments, frequency-based loyalty system, SaaS tier subscriptions, moderator permissions, and CMS (blogs/guides), plus Docker CI/CD and automated cleanup.
- Engineered Ecole at Home LMS backend automating virtual-school operations (NestJS + TypeORM): tri-role identity, teacher availability mapping, and RxJS-resilient Zoom scheduler eliminating manual bookings.
- Delivered end-to-end student experience: Stripe payments, automated Zoom-to-Vimeo recording pipeline, transactional emails, and dedicated upcoming/past course portals.
- Tech Stack: NestJS, TypeScript, TypeORM, MySQL, Stripe, Twilio, Zoom, Vimeo, Nodemailer, Docker, RxJS, Passport.js, Google Cloud Run.

Full Stack Engineer, Data Intuition – Algiers, Algeria

May 2022 – Aug 2022

- Maintained and modernized three legacy production platforms built with Express.js and EJS, ensuring 99.9% uptime during transitions.
- Implemented critical feature updates and resolved security vulnerabilities in high-traffic administrative portals.

Education

Higher School of Computer Science (ESI-SBA), Master of Science (M.S.) in Computer Science – Sidi Bel Abbes, Algeria Sept 2019 – Sept 2024

- Master's Thesis: 'Leveraging Gemini Pro and BERT for Automated IMRaD Classification: A Novel Dataset and SaaS Platform'. (Notebooks). Architected a scalable 7-node distributed system (Next.js, FastAPI, TF Serving, Express.js, Eureka) to automate the rhetorical classification of semantic moves and sub-moves within the introduction sections of scientific papers.
- Key Contributions & Pipeline: Addressed the lack of sentence-level IMRaD datasets by engineering a 3-phase Gemini Pro pipeline (baseline generation, prompt refinement, and outlier detection/augmentation). Synthesized and validated a custom 169k-sentence dataset, boosting baseline accuracy from 44.61% to >94% (Peak F1: 98.21%) by fine-tuning 4 hierarchical BERT models.

Projects

Contracts Management System

Designed during an internship at Béjaïa's harbor company (BMT), this real-time contracts and organizational management dashboard empowers juridicals, admins, and employees. Built with Clean Architecture, Domain-Driven Design (DDD), and Event-Driven Design, the platform features a Feature-Sliced Next.js frontend and a NestJS backend leveraging Redis Pub/Sub to horizontally scale WebSockets, fully validated by comprehensive unit and integration tests.

Chess Game Engine

A scalable TypeScript chess engine (DDD + Hexagonal Architecture) featuring a Polymorphic Move Strategy and deep-cloning Rules Engine to handle complex state transitions and edge cases within a Turborepo monorepo.

vgath 8086

An open-source Intel 8086 emulator and assembler for the browser (Vanilla JS), developed as a 2nd-year university final project in a team of 6, featuring instruction set simulation and interactive debugging.

Skills

Languages: TypeScript, JavaScript (ES2023+), PHP 8.3+, SQL, Python, Java, C++

Frameworks & Libraries: Laravel 12, Next.js 15, React 19, NestJS, Tailwind CSS, TanStack Query v5, Shadcn UI, TypeORM, Prisma

Backend & Infrastructure: MySQL, PostgreSQL, Docker, Turborepo, Laravel Sanctum, GitHub Actions, Google Cloud Run, PlanetScale

Integrations & APIs: Stripe Connect, Shopify & WooCommerce APIs, Zoom & Vimeo APIs, Twilio, OAuth 2.0, Browsershot (Puppeteer)