

Yousuf Boutahar El Maachi

Senior Fullstack Engineer

GRAN CANARIA, SPAIN · REMOTE

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I have spent 4 years and 1 month writing Python and TypeScript in production. I build the whole product. And I ship it myself. At SABAU STRAPPING I own whole services —FastAPI and PostgreSQL at the back, Next.js at the front, Docker, CI/CD and a Helm chart at the end— and the AI microservices I run are the proof of it.

~4,800 commits since August 2022 6th of ~35 on a 29,000-commit product 4 microservices of my own in production

EXPERIENCE

Senior Product & Experience Engineer

SABAU STRAPPING · Jan 2026 – Present · Canary Islands, remote

Full ownership of product and AI services, from the data model through to deployment on Kubernetes, plus the platform frontend. That is the formal job title; the work itself is full-stack, end to end, and that is how I introduce myself.

- I build and run services end to end: FastAPI and Pydantic v2 with PostgreSQL at the back, Next.js and React at the front, and at the end Docker, CI/CD, a Helm chart of my own and deployment onto the production cluster.
- I maintain the platform frontend in Next.js 16 and React 19: internationalization by BCP 47 tags across nine regions, analytics on hexagonal architecture, and tests in three layers with Vitest, Testing Library and Cypress with cypress-axe.
- I run a RAG service over operational conversation history: semantic grouping by topic rather than by time, hybrid vector and keyword search on PostgreSQL with pgvector, and routing by how broad the query is.
- I build the agent layer with LangGraph and LangChain 1.0 —multi-server MCP client, response streaming over SSE, tracing with LangSmith—, the memory service chosen between three measured architectures, and my own MCP servers with FastMCP.

Python 3.12 · FastAPI · PostgreSQL + pgvector · Next.js 16 · React 19 · TypeScript 5.9 · LangGraph 1.0 · MCP · SSE · Neo4j · NATS · Kubernetes · Helm 3 · Docker

Full-Stack Developer, with technical leadership of the frontend

Talents · Aug 2022 – Jan 2026 · Gran Canaria, Spain

Online training, sales management and public funding compliance platform: 3,784 commits of mine out of 29,000, sixth of ~35 authors.

- I led the end-to-end modernization of the interface: out went the off-the-shelf template, in came an architecture of our own, with technical standards, a team style guide and a component library.
- I mentored through systematic code review, coordinated the frontend and backend teams and the stakeholders, and ran an infrastructure provider migration alongside several microservice projects in parallel.
- I took ownership of entire Django domains —campaigns, social media automation, a public portal with technical SEO and charting— and moved to integrations with a workflow engine with service-to-service authentication and retries.
- I optimized production queries with fast and slow paths and cache invalidation, and worked across 205 Behave scenario files on a GitLab CI pipeline with self-hosted runners.

Django 4.2 · Django REST Framework · Celery · Django Channels · PostgreSQL · React 17 · TypeScript · Material UI 5 · Redux · Auth0 · Behave · GitLab CI

Instructor, civil service IT technician exam preparation course

Flou · Aug 2022 – Jan 2023 · Self-employed

Full syllabus, my own materials and question banks in the real exam format, with individual follow-up across the group.

Coordinator and instructor, programming and robotics workshops

IUCTC · Mar 2021 – Aug 2022 · Las Palmas de Gran Canaria

Calendar, materials and instructor team for the workshop programme, plus direct teaching to secondary school groups.

Ciberlandia programme lead — workshops in secondary schools

IUCTC · Oct 2020 – Aug 2022 · Las Palmas de Gran Canaria

Technology outreach delivered inside secondary schools, part-time for nearly two years.

SELECTED PROJECTS

No internal names, no clients and no business figures: company work is described through skills and architectural decisions.

A complete agent layer, from zero to a shipped container in a day

AI AND AGENTS

PROBLEM	The agents had to use the business systems as governed tools, never with direct access to their databases: that meant authentication, scoped permissions and streaming responses.
APPROACH	Seven numbered pull requests: scaffolding, per-environment configuration, authentication, a scoped tool registry, a multi-server MCP client, streaming over SSE and a React dashboard, with tests, a Docker image and CI.
RESULT	In a single day the whole pattern was in place, with a container, CI and documentation; the service went into production later, and on it we built a canonical entity resolution agent with confidence and risk rules.

Python 3.12 · FastAPI · LangChain 1.0 · LangGraph · langchain-mcp-adapters · LangSmith · SSE · React · Vite · Docker

Self-hosted n8n in queue mode, delivered with an emergency runbook

BACKEND AND OPERATIONS

PROBLEM	Business processes had to be automated without depending on the managed version and without the data leaving our own infrastructure. And a service like that is worth nothing if nobody can bring it back up when it fails in the middle of the night.
APPROACH	Docker Compose with n8n in queue mode, PostgreSQL 15 as the state database and Redis 7 as the job queue, health checks and CPU and memory limits on every container, integration with the backend over service-to-service token authentication with retries, and fourteen Bash scripts for backup, restore, health monitoring and stress testing.
RESULT	Delivered with sixteen operations documents —high availability, emergency runbook, operations guide, backup strategy and production verification— and with the embedded credentials stripped out of the repository: a service somebody else can run without calling me.

Self-hosted n8n · Docker Compose · PostgreSQL 15 · Redis 7 · Bash · health checks and resource limits · service-to-service token auth

Hexagonal analytics: dropping the vendor without touching the domain

ARCHITECTURE

PROBLEM	Analytics on the main frontend was tied to an external vendor, and that dependency worked its way into the product code, which is exactly where a third party must never reach.
APPROACH	Full hexagonal discipline: a repository interface that defines what the domain needs, a storage manager behind it, and a transport layer with a circuit breaker and retry so a vendor outage can neither drag the interface down nor lose events.
RESULT	When the call came to drop the vendor, the adapter was swapped and the domain was left untouched: zero changes. Ports and adapters demonstrated in production instead of on a whiteboard.

TypeScript 5.9 · Next.js 16 · React 19 · Hexagonal architecture · Vitest · Testing Library

Plus three live sites of my own in Gran Canaria: qahwa.es, tacosfrancos.es and varaderodemogan.es. Astro 6, Tailwind CSS 4 and Cloudflare Pages, from gathering the content to the domain, with a reprocessing pass that took 46 MB of images down to 4 MB.

STACK	
LANGUAGES	Python 3.12 · TypeScript 5.9 · JavaScript ES2020+ · SQL · Bash · Semantic HTML5 · Modern CSS
BACKEND AND DATA	FastAPI · Django 4.2 and Django REST Framework · Celery · Django Channels · Async SQLAlchemy 2 · Pydantic v2 · PostgreSQL 16 with pgvector · Neo4j 5 bitemporal · Redis 7 · MongoDB · NATS
FRONTEND	React 19 and 17 · Next.js 16 · Astro 6 · Tailwind CSS 4 · Radix UI · Vite 7 · Material UI 5 · Zod · React Hook Form · TanStack Table · Three.js with React Three Fiber
AI AND AGENTS	LangGraph 1.0 · LangChain 1.0 · MCP (Model Context Protocol), server and client · FastMCP · langchain-mcp-adapters · LangSmith · OpenAI API · RAG with hybrid search · Graphiti · Mem0 · spaCy
INFRASTRUCTURE	Docker · Multi-environment Docker Compose · Kubernetes · Helm 3 · Traefik as Ingress Controller · cert-manager · Linux (Rocky and Debian) · Nginx with TLS · self-hosted n8n in queue mode · Prometheus · Grafana · OpenTelemetry
SECURITY AND CI/CD	OIDC and OAuth2 with JWKS validation · service-to-service JWT · self-hosted Vaultwarden · Content Security Policy · TruffleHog in the pipeline · GitHub Actions · GitLab CI · GitHub Container Registry · Cloudflare Pages
QUALITY	pytest with async and parallel support · Vitest · Jest · Cypress with cypress-axe · Behave (Gherkin) · strict mypy · Ruff · ESLint · Prettier · ShellCheck · Playwright · uv · pnpm

This list only holds technology with commits of mine behind it. That is why you will not find Terraform here, or public cloud, or languages I do not write.

EDUCATION	
BSc in Computer Engineering, Software Engineering specialism · Universidad de Las Palmas de Gran Canaria (ULPGC)	Sep 2016 — Jun 2022
Final average: 8 out of 10. Final year project: indoor positioning on a robotics platform using Bluetooth Low Energy (BLE).	
Full-stack web development course, 280 hours · Escuela de Organización Industrial (EOI)	Mar — Jun 2022
Software testing course, 124 hours · Escuela de Organización Industrial (EOI)	Jun — Jul 2022
Train-the-trainer methodology and e-learning design · Professional qualification	2023

TEACHING AND LANGUAGES	
Teaching.	Nearly two years of programming and robotics workshops in secondary schools, coordinating the programme and its instructors, a civil service IT technician exam preparation course, and internal technical courses inside a product company. Explaining well trains the same muscle as defending an architectural decision or leaving a code review that teaches.
Languages.	Spanish, native. English, advanced in technical settings: documentation, code review and working meetings.