DANIEL FAVOUR DOHOU

Backend Software Engineer · Python · Django · PostgreSQL · Celery · Docker

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PROFESSIONAL SUMMARY

Backend engineer building production Python systems: REST APIs, Celery and Redis task pipelines, and AI services on PostgreSQL and Docker. I built and own the backend of Lune, a live hiring platform with 400+ users, where model output is checked against deterministic rules before anyone relies on it, and every release passes CI tests, secret scanning and a security check. I also built Smart ATS (300+ users), whose skill engine now powers Lune through an API, and Ìtọ́ni, a health tool that gives clinic patients medicine instructions in Swahili text and audio with safeguards on every dose. Full overlap with European working hours.

TECHNICAL SKILLS

Languages	Python (primary) · TypeScript · JavaScript · SQL · Bash
Backend	Django · Django REST Framework · FastAPI · Flask · Node.js · Express · REST API design · OpenAPI · WebSockets · Scrapy · Paystack · Flutterwave
Frontend	React · Next.js · Vite · Tailwind CSS
Async	Celery · Celery Beat · Redis as broker · idempotent tasks · queue-and-retry patterns
Databases	PostgreSQL (schema design, constraints, indexing, query optimisation) · pgvector · Redis · MySQL · MongoDB · Supabase · Meilisearch
AI & LLMs	Gemini · Vertex AI · OpenAI · Claude API · Groq · multi-provider failover · LangChain · RAG over pgvector · grounding in source data · output validation against deterministic checks · Claude Code (daily)
Security	Cookie JWT with refresh rotation · role-based access control · TOTP 2FA · webhook HMAC verification · SSRF allowlisting · secret scanning · audit logging
CI & Operations	GitHub Actions · pytest · Playwright · gitleaks · Dependabot · Docker · Docker Compose · Nginx · Render · AWS · Sentry · structlog

WORK EXPERIENCE

Backend Software Engineer · Lune (lunehire.com) *Mar 2026 - Present*

- Built and own the backend of Lune, a skills-verification hiring platform on Django, DRF, PostgreSQL, Redis, Celery and Docker, split into 12 Django apps so assessment, hiring workflow and billing change independently. Launched July 2026, serving 400+ users.
- Built LLM failover across providers with per-provider circuit breakers. Embeddings run on a separate chain, because vectors from different models are not comparable and corrupt retrieval if mixed.
- Built three layers of anti-fabrication checks into the CV builder: a deterministic parser overrides model output on hard facts, and verified skills are attached server-side, outside the model's context.
- Connected the Job Requirements Engine to the Smart ATS skill engine through an API boundary, so unverified candidate claims never reach the verified scoring path.
- Built Paystack and Flutterwave payments that fail closed, with HMAC-verified idempotent webhooks and geo-resolved charge currency. Downgrades now cancel at the provider first, which closed a path that reported success while cards were still being charged.
- Set the release standard: CI gates every merge on the pytest suite, gitleaks blocks committed secrets, and a pre-deploy check aborts any release where a private bucket holding CVs or KYC documents has become public.
- Enforced access control in middleware that individual views cannot bypass, made TOTP 2FA mandatory for staff roles, and wired Sentry with a PII scrubber and deep health checks across every integration.

Freelance Backend Engineer · Independent Client Work *2025 - 2026*

- Built the backends for eight client platforms across real estate, logistics, retail and community sectors, averaging 9.1 / 10 in post-project client satisfaction surveys.
- Built a TypeScript quote API on Node.js and Express 5 for a Lagos and UK freight forwarder: per-visitor and global rate limits, a honeypot, duplicate detection, origin checks, Brevo with an SMTP fallback, nothing stored, and a 42-check smoke test.
- Moved booking availability checks to the server and built a receipt tool that calculates totals from booking data instead of manual entry.

SW Learning Community Experience Manager · ALX Nigeria *Jun 2025 - Dec 2025*

- Managed 13 concurrent software engineering cohorts with 4,000+ active learners and 500+ graduates, holding retention above 50% at 8.76 CSAT and 4.53 NPS.
- Built gamification and KPI dashboards on learner engagement data, used to make retention decisions.

SW Engineering Volunteer Mentor · ALX Nigeria *Jan 2024 - Mar 2025*

- Mentored learners on backend engineering, debugging and project architecture, and ran 20+ peer learning sessions. Received an official commendation from the ALX Learning Experience team.

Technical Support Officer · Alov Air Sea Ltd *Jan 2023 - Jun 2023*

- Resolved hardware, software and network problems through systematic root-cause diagnosis and maintained the hardware inventory.

ENGINEERING PROJECTS

A Beautiful Mind *Personal productivity app with an AI agent | a-beautiful-mind.dohoudanielfavour.me*

Node.js · Express · Prisma · PostgreSQL · pg-boss · Gemini function calling · Zod

- Built Gideon, a Gemini function-calling agent with 44 tools, an 8-step loop cap and per-user memory, used by an invited group. Reads run at once; writes wait for the user's approval, with one narrow exception.
- Fixed an authorisation flaw (CWE-863): the confirm step ran client-sent arguments instead of the stored proposal. Wrote tests that fail before the fix and pass after it.
- Zod validates model arguments as untrusted input, and identity comes from the session, never the model, so queries stay scoped to the signed-in user.
- 1,240+ unit and 730+ integration tests. The integration suite refuses to run unless the database name contains "test".

Ìtọ́ni (Itoni) *1st place, Build With NKENNEAi Hackathon (Oct 2026) | github.com/dohoudaniel/itoni*

Django 5.2 · PostgreSQL · React 18 · TypeScript · Vite · Tailwind CSS · NKENNEAi speech and translation APIs

- Clinic tool that turns medicine instructions into Swahili text and audio, handed to patients by QR code, and translates their Swahili voice replies into English for staff.
- Built for medication safety: doses and dates always render as digits, placeholder validation stops a translation from changing a dose, a fluent reviewer approves each sentence, and the system never replies to patients on its own.
- One API client for all four NKENNEAi APIs with timeouts, retries only on gateway and network errors, and one log row per call. Translations and audio are cached per sentence. 134 automated tests run with no network calls.

Smart ATS *Algorithmia SE product · 300+ users · powers Lune Hire*

Django · PostgreSQL · Redis · Celery · Docker · Gemini AI

- Designed the full backend of an AI career platform used by 300+ job seekers, with 150+ CVs reviewed: REST endpoints, PostgreSQL schema, cookie JWT authentication with refresh token rotation, and role-based access control.
- CV analysis runs on Celery workers and returns through a polling endpoint, so requests are never held open. Django, Gunicorn, Celery, Redis and PostgreSQL deploy with one Docker Compose command.

Spotter Fuel Route API *Backend assessment | github.com/dohoudaniel/spotter-backend-django*

Django · NumPy · SciPy · OSRM

- Returns a US driving route, the cost-optimal set of fuel stops and total fuel cost using exactly one external API call per request.
- Stations are geocoded once at import, so matching and optimisation run in memory in under a second, without PostGIS.

Vidannotate *Open source CLI*

Python · Gemini API · Vertex AI · faster-whisper · ffmpeg

- Turns video into a timestamped record in four resumable stages, keyed by content hash so a job survives a file rename. A local faster-whisper transcript is given to the model as ground truth, so it quotes instead of inventing.

AWARDS

- 1st place, Build With NKENNEAi Hackathon (Oct 2026), Ìtọ́ni
- 1st runner-up, Orvalon Digital Community Talent Hunt (Sep 2026), pitching Lune Hire
- Featured in ThisDay Live: "From A Shy Rookie to A Tech Leader"

OPEN SOURCE & COMMUNITY

- Outreachy, Debian (wafer-debconf, a Django app): found, reproduced and fixed two backend bugs in a codebase I did not write, each with a filed issue and a regression test that fails before the fix. One was a management command crashing on PyYAML 6 before any speaker was emailed (switched to yaml.safe_load); the other was speakers double-counted across a multi-valued join (added .distinct()). Both are open for review; a French translation of the certificates app was merged.
- Also reached the Outreachy contribution phase with the Fedora Project (Mar to Apr 2026).
- Founder of Algorithmia SE, an open-source engineering community of 300+ members.

EDUCATION & CERTIFICATIONS

B.Sc. Computer Science (in progress) · University of the People · Expected 2028

ALX Software Engineering (Backend Specialisation) · ALX ProDev Backend · ALX Cybersecurity · Google Africa Developer Scholarship