Oscar Fernandez

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Experience

Co-Founder & CTO April 2026 – Present
Intake (Lanzadera accelerator) – AI helpdesk for B2B companies, in production with paying customers *Valencia, Spain*

- Built and operate the backend, AI agent and AWS infrastructure end to end, shipping **240+ production releases** in 7 months across 3 services behind a **6,500+ test** suite and a PR-gated CI/CD pipeline
- Built the agentic support system: a **Claude** tool-calling loop over each company's knowledge base (RAG) and its own APIs, with guardrails and human handoff, answering customers on WhatsApp, web chat and email
- Designed the evaluation pipeline that gates every AI change (LLM-as-judge on real conversations, retrieval benchmarks, blind model comparisons), used to choose, tune and migrate models
- Implemented the **Model Context Protocol** on both sides: an MCP server with its own OAuth 2.1 authorization server, and an MCP client that connects customers' own tools to the agent
- Built channel and business integrations as a separate service: WhatsApp Business as a verified **Meta Tech Provider**, Slack, email, Shopify, HubSpot, and public APIs for Zapier and Make
- Brought the live AWS estate (ECS Fargate, RDS, ElastiCache, CloudFront) under **Terraform** by import with zero recreated resources, and added monitoring, alerting and backups
- Replaced Celery in production with ArdiQ, my own Rust-core task queue, which now runs every background job
- Run recurring security audits covering multi-tenant isolation, access control, container hardening and PII scrubbing

Full Stack Developer Intern September 2025 – April 2026
Moodest – B2B SaaS AI platform for HR *Mataró, Spain*

- Developed a FastAPI REST API integrating with a time-tracking platform of **300,000+ users**, covering authentication, role management and KPIs
- Built **4 channel integrations** for the conversational agent, including Slack and Microsoft Teams, from protocol design to deployment
- Led development of the people analytics dashboard (Angular, TypeScript, NestJS) and managed Docker and Nginx production deployments on a self-hosted server

Projects

ArdiQ | *Rust, Python, PyO3, Tokio, Redis Streams* ardiq.bytay.dev

- Open-source task queue for Python with a Rust core that runs the worker loop and all Redis I/O off the GIL; published on PyPI (v1.2, MIT) and running in production at Intake
- Leads CPU-bound and dispatch throughput in a public, reproducible benchmark against Celery, ARQ, Dramatiq, Taskiq and Streaq, enqueuing **81,000 tasks/s** on 33 MB of memory

wong | *Go, SQLite, MCP* wong.bytay.dev

- Open-source memory layer for coding agents (Claude Code, Codex, Cursor): one brain per project synced across machines through a self-hosted server, with every note verified against the files, commits and issues it cites
- Ships as a single Go binary with a dashboard, an MCP server and optional end-to-end encryption

Uatu | *Python, FastAPI, PostGIS, NumPy, Sentinel-1 SAR* github.com/17tayyy/uatu

- Dark-vessel detection on the Spanish coast: pairs Sentinel-1 radar detections with recorded AIS to find ships that are not broadcasting, running 24/7 and tracking about 1,300 vessels an hour

Security research and LLM benchmarks bytay.dev/blog

- Found and responsibly disclosed an IDOR chain leading to full account takeover in the internship platform used by every vocational student in Catalonia (**200,000+ students**); patched
- Benchmarked Claude Haiku 5.5 over 960 support conversations, showing that disabling thinking made the agent miss 25% of required human handoffs versus 0% at low effort

Technical Skills

Languages: Python, Rust, Go, TypeScript/JavaScript, SQL, Bash
Backend and AI: FastAPI, asyncio, SQLAlchemy, Pydantic, NestJS, agentic systems, RAG, LLM evaluation, MCP, Anthropic API, Amazon Bedrock
Data and Infrastructure: MongoDB Atlas (Vector Search), PostgreSQL, Redis, AWS, Terraform, Docker, GitHub Actions
Security: Web pentesting, multi-tenant isolation, security audits, OSINT, Hack The Box (25+ machines)

Education

Higher Vocational Diploma in Multiplatform Application Development (DAM) Expected 2028
Prometeo FP by thePower (online), alongside a Cybersecurity Master's *Spain*

Intermediate Vocational Diploma in Computer Systems and Networks (SMR) 2026
Escola Pia Santa Anna *Mataró, Spain*

Languages: Spanish and Catalan (native), English (professional working proficiency)