

Emanuele Czofei

Software Engineer · Python Backend & AI Integrations

Gipuzkoa, Spain (CET) · EU citizen · Remote (EU / UK / US-overlap) · Italian & Romanian (native), Spanish (fluent), English (professional)
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SUMMARY

Backend engineer who builds AI features into working software: retrieval over real document sets, tool-using agents (LangGraph, MCP), and the Python / FastAPI / PostgreSQL services underneath, with a TypeScript / Next.js front end when the product needs one. Self-taught since 2024, with one remote internship at a Stockholm AI startup and one paid client website in production. I reproduce problems from logs and stack traces, and I can explain the fix to customers in four languages. Looking for a junior, internship or contract role where I ship to real users.

EXPERIENCE

Construction Worker — Servibai

Gipuzkoa, Spain | Mar 2026 — Present

Full-time site work in a Spanish-speaking crew, alongside the software work on this page.

Web Developer (freelance) — Servibai

Gipuzkoa, Spain | Sep — Dec 2025

Built and launched servibai.com for the company's repair service, on my own: a Next.js / TypeScript landing page on Vercel covering six trades, with call buttons throughout. Paid project; it has brought in around 5 new customers so far.

AI & Full-Stack Engineer Intern — Gaddr

Stockholm, Sweden · Remote | Sep — Dec 2025

Shipped authentication pages for an AI-driven web application in Next.js / TypeScript; implemented Zod request/response validation for an external API integration, working remotely in English with a Swedish team.

Technical Challenge — SlideSpeak

AI presentation startup | 2025

Built an async PowerPoint-to-PDF conversion service under time constraint — FastAPI upload endpoint dispatching Celery workers via Redis, server-side LibreOffice conversion, S3 storage, client-side job polling. Fast-tracked past intermediate interview rounds.

PROJECTS · self-directed, 2024 — present

Docent — AI Support Agent for GitHub Issues **PROTOTYPE**

github.com/emanuelecz/Docent-Backend

Drafts answers to new pydantic/pydantic issues from ~1,500 already-solved ones | Python · FastAPI · LangGraph · Celery · Postgres/pgvector · Redis · MCP

- Corpus of ~1,500 resolved issues ingested through GitHub GraphQL fetchers and Celery pollers; when an issue closes, a poller checks it was actually solved before promoting it, so the corpus grows on its own. Alembic-versioned schema.
- Hybrid retrieval — pgvector plus Postgres full-text search, fused with reciprocal rank fusion and reranked. LangGraph flow intake → research → draft; the research step calls the GitHub MCP server as a client through a read-only, ten-call allow-list and hands drafting a typed Pydantic brief with citations.
- Fixed wrong answers at the data, not the prompt:** drafts were fluent but cited the wrong issues. I stored solutions instead of closed tickets (closing-PR body, a noise-filtered last comment, or nothing) and embedded only the title and original question.

Spanish Occupational-Safety RAG Assistant

github.com/emanuelecz/rag_project

Python · FastAPI · LangChain · ChromaDB · VoyageAI voyage-3 + rerank-2.5 · Claude API · Next.js · GitHub Actions

- End-to-end RAG over the Spanish INSHT/NTP safety corpus — hybrid BM25 + dense retrieval, cross-encoder reranking, grounded answers with citations, Next.js front end.
- Retrieval measured on a 50-question hand-labeled set: **Hit@8 0.98, MRR 0.955, Precision@8 0.69**; quality checks run in GitHub Actions on every pull request.

Triage (RepoDoctor) — Automated Code-Diagnosis Agent

github.com/emanuelecz/Triage

LangGraph state machine that clones a target repository, auto-detects its stack, installs dependencies and runs the project's own test / build / lint suites to explain what is failing — every claim grounded in real command output. Isolated sandbox and throwaway virtualenv per repo, async subprocess execution with timeouts, Next.js UI streaming progress over server-sent events.

TECHNICAL SKILLS

Backend: Python, FastAPI, PostgreSQL / pgvector, SQLAlchemy, Alembic, Celery, Redis, REST API design, async Python, Docker & Docker Compose, GitHub Actions, Railway, Vercel, AWS S3.

AI integration: RAG pipelines (hybrid BM25 + dense, cross-encoder reranking), LangGraph (agent orchestration, state machines), LangChain, MCP clients, Claude API, OpenAI API, VoyageAI embeddings, structured outputs, Langfuse tracing.

Frontend: TypeScript, Next.js, React, Tailwind CSS, streaming UI (server-sent events), internationalization (ES/EN). | **Learning now:** Rust.

EDUCATION

Self-taught software engineering, 2024 — present. AWS Certified AI Practitioner (AIF-C01) — in progress.