

# Tiago Fortunato | Software Engineer |

## Backend & AI Applications

Python | FastAPI | LangChain | RAG | Built SaaS (Odys)  
Berlin, Germany

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## Profile

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Software Engineer building backend systems and AI-powered applications — RAG pipelines, Vision AI classification, LLM integration with observability. Founder of **Odys** (odys.com.br), a live SaaS product built entirely solo. MSc Software Engineering, Berlin 2026. Background in Mechanical Engineering. Trilingual: Portuguese (native), English (fluent), German (B2). Available for AI Application Engineer, Backend Developer, or Product Engineer roles in Berlin or remote.

## Skills

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**Backend Engineering:** Python, FastAPI, PostgreSQL, SQLAlchemy, Drizzle ORM, Pydantic, Alembic, JWT, Pytest; Production REST APIs with clean architecture, automated testing, and CI/CD. Skilled in schema design, migrations, auth flows, and data modeling.

**Full-Stack & SaaS:** TypeScript, Next.js 16, Supabase, Stripe, Resend, Upstash Redis, Evolution API; End-to-end SaaS product development with multi-tenant architecture, subscription billing, transactional email, rate limiting, and third-party integrations. Comfortable owning the full product lifecycle from auth to deployment.

**DevOps & Infrastructure:** Docker, GitHub Actions, CI/CD, Railway, Vercel, Git; Containerizing applications, building automated deployment pipelines, and managing cloud infrastructure across multiple platforms.

**AI & LLM Applications:** LangChain, ChromaDB, RAG, Groq, Vision AI, LangSmith, RAGAs, fastembed, YOLOv8, Scikit-learn, PyTorch, Claude Code; Production RAG pipelines with retrieval evaluation; Vision AI classification with structured LLM output; LLM observability and tracing; computer vision for object detection.

## Projects

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**Next.js 16 · TypeScript · Supabase · Stripe · Docker · Railway**

**Berlin**

*Odys — Scheduling SaaS for Freelance Professionals*

*2026–present*

WhatsApp-first SaaS platform where clients book online and receive automatic WhatsApp reminders; professionals manage availability, payments, and appointments from a dashboard. Live at odys.com.br.

- Multi-tenant architecture: each professional gets a public booking page at /p/[slug] with fully isolated data and configurable availability
- Stripe subscriptions + PIX with webhook handling; Supabase Auth; Drizzle ORM on PostgreSQL; resolved Pg-Bouncer transaction mode compatibility
- WhatsApp-native reminders via self-hosted Evolution API v2 on Railway, triggered by Supabase pg\_cron — not a third-party bot
- Rate limiting with Upstash Redis; error monitoring with Sentry; transactional email via Resend; CI/CD via GitHub Actions

**FastAPI · LangChain · ChromaDB · Groq · RAGAs · Docker**

**Berlin**

*AI Career Assistant — RAG Chatbot*

*2026*

AI-powered chatbot where recruiters ask questions about my background — built with a RAG pipeline over a curated knowledge base. Streaming responses via Groq (Llama 3.1), conversation history, suggested follow-ups, and evaluation with RAGAs. Live Demo | GitHub

**FastAPI · Groq Vision AI · LangChain · LangSmith · PostgreSQL · Docker** **Berlin**  
*Inspection Management API — AI-Powered* **2026**  
Production REST API with autonomous AI classification: upload a photo and the system classifies severity and damage type via Vision AI, with explainable rationale.

- Vision AI via Groq SDK; structured LLM output with LangChain; LangSmith for observability; XAI rationale field for transparency
- JWT auth with admin role; 31 Pytest tests; CI/CD via GitHub Actions; frontend dashboard with image upload and AI status badges — API Docs | GitHub

**YOLOv8 · PyTorch · Python · RDD2022** **Berlin**  
*Road Hazard Detection & Prioritization — MSc Thesis* **2025–2026**  
Deep learning detection pipeline combined with a rule-based expert system for automated road maintenance prioritization.

- Best config (YOLOv8s): **mAP50 0.663, Precision 0.694, Recall 0.604**; post-processing reduced noisy detections by **31.2%** — every decision traceable to explicit rules

## Experience

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**Odys · odys.com.br** **Berlin, Germany**  
*Founder & Full-Stack Developer* **2026–present**

- Identified a real market gap — Brazilian freelance professionals losing time and money managing bookings manually via WhatsApp — and built a product to solve it
- Owned the full product lifecycle: market research, product design, technical architecture, implementation, and production deployment
- Built and launched an MVP as sole developer within weeks; product is live and onboarding first users

**Fortunato Joias — Jewelry & Manufacturing** **Brazil**  
*Project Manager* **2019–2024**

- Owned production planning, supplier relationships, and delivery cycles — five years of end-to-end operational ownership

**Metalúrgica Besser** **Rio de Janeiro, Brazil**  
*Engineering Intern — Logistics & Operations* **2018–2019**

- Supported logistics routines and production planning; reduced delays through structured problem solving

**Guide Idiomas** **Rio de Janeiro, Brazil**  
*Co-Founder & German Teacher* **2016–2018**

- Co-founded a German language school; developed structured curricula and managed scheduling and operations

## Education

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**University of Europe for Applied Sciences** **Berlin, Germany**  
*MSc Software Engineering* **2024–2026**  
Thesis: *Expert System for Road Surface Hazard Detection* — YOLOv8 pipeline with rule-based prioritization (RDD2022)

**Hochschule Wismar** **Germany**  
*Exchange Student — Mechanical Engineering* **2014–2016**

**UERJ** **Rio de Janeiro, Brazil**  
*BSc Mechanical Engineering* **2013–2018**

## Languages

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Portuguese (Native) · English (Fluent) · German (B2.2, improving)