

AMIR TABATABAEI

Backend & Full-Stack Engineer · Python · FastAPI · TypeScript

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PROFILE

Backend and full-stack engineer with two years building production-style web platforms in Python and FastAPI, and in TypeScript across the frontend. I own the parts teams most often get wrong: authentication and two-factor flows, role-based access control, multi-tenant data isolation, and the API contracts everything else depends on. I ship the endpoints, the data model, the Docker setup and the CI pipeline, and I write the tests. Secondary focus in applied AI — RAG pipelines and computer vision.

CORE SKILLS

Backend Python, FastAPI, Django, REST API design, PostgreSQL, SQLAlchemy, Pydantic, JWT / OAuth2

Frontend TypeScript, JavaScript, React, Next.js, Jinja2, Tailwind CSS, GSAP

AI / ML PyTorch, OpenCV, CNN / ResNet, RAG, Diffusion Models, ControlNet, Segment Anything

DevOps Docker, Docker Compose, Git / GitHub, GitHub Actions CI, Linux, AWS (S3, EC2), MinIO, Sentry

Practices OpenAPI contract-first design, Playwright end-to-end testing, multi-tenant architecture

EXPERIENCE

Freelance Backend Engineer — *Independent three-person team*

Sep 2024 – Present

İzmir, Türkiye · Remote · Backend owner across all client engagements below.

EVO — Field Merchandising Route Planner · .NET 10, React, TypeScript

Jul 2026 – Present

- Building a route-planning tool for field merchandising supervisors — store visits, visit frequencies, in-store tasks and schedules. In active development for a prospective client.
- Drove the architecture: contract-first design where the backend emits an OpenAPI specification that generates the typed client for the React and Vite panel.
- Defined the layered service boundaries, the SQL Server and MinIO storage design, and the Docker Compose environment.
- Set the test strategy across unit and end-to-end layers, and authored the specifications, architecture decisions and roadmap the build was executed against. 170+ commits to date.

KohaApp — Tournament Management Platform · *paid engagement*

Oct 2024 – Dec 2025

- Built the FastAPI backend for tournament registration — player and team models, submission forms, and an admin panel replacing paper-based registration with digital verification.
- Implemented automatic ID-card generation, including bulk generation, removing the manual card-making step for tournament organisers.
- Secured registration with reCAPTCHA and JWT authentication; added Sentry error monitoring and a GitHub Actions deployment workflow.
- Deployed with Docker Compose and maintained the platform through December 2025.

Dubai Visa Platform — Multi-Tenant Agency Dashboard

Aug 2025

- Designed a FastAPI and Jinja2 dashboard for visa request management, document uploads, accounting pages and user administration.
- Implemented white-label multi-tenancy so each agency sees only its own data and branding.
- Built role-based access control across five roles — SuperAdmin, Manager, Agent, Accountant and Visa Editor — with permission-driven adaptive menus.
- Integrated with a core backend over JWT-secured APIs, enforcing one-device login, Google OTP, reCAPTCHA and full audit logging.

RashApp — Product Warranty & Customer Platform

Sep 2024 – Mar 2025

- Owned the FastAPI backend: account, authentication and user CRUD modules, Pydantic schemas, and SQLAlchemy models.
- Implemented two-factor authentication for both sign-up and login, plus password reset and an SMS verification service.
- Built profile management with avatar upload and file size and type validation, and a product warranty-check flow.
- Collaborated with two front-end developers on feature integration. Project reached completion but was cancelled by the client before launch.

SELECTED PROJECTS

AI Engineering OS — Multi-Agent Development System

Jul 2026

- Reusable system for running AI coding agents as a coordinated engineering team: specialised subagents, reusable skill playbooks, lifecycle hooks and a coordinator agent.

- Designed around shared documents as the message bus — subagents run in isolated context and stay in sync through versioned documentation rather than direct communication.

AI Product Styler — Computer Vision & Generative AI

May 2025

- Automated product-image pipeline: object segmentation, background removal, diffusion-based background generation and final compositing.
- Integrated Segment Anything (SAM) and ControlNet with Stable Diffusion to preserve product integrity while restyling backgrounds; exposed via a FastAPI backend for batch processing.

Smart PDF GenAI Assistant — Retrieval-Augmented Generation

May 2025

- PDF analyser and categoriser built on the Gemini API with RAG; designed the ingestion, chunking and retrieval pipeline to extract, structure and summarise document content.
- Submitted to the Kaggle GenAI Capstone and documented in a public Medium article.

CIFAR-10 Image Classifier · *PyTorch*

May 2025

- Trained and evaluated deep CNN and ResNet18 models in a modular train / test / models structure; visualised predictions and confusion matrices to analyse failure modes.

EDUCATION

Bachelor's Degree, International Trade and Finance

2019 – 2023

Pamukkale Üniversitesi (PAÜ), Türkiye

LANGUAGES

English (Professional) · Turkish (Professional) · Persian (Native)