ALBARA HASSAN

Senior Backend Engineer | Python, FastAPI, PostgreSQL, LLM Systems

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PROFESSIONAL SUMMARY

Senior Backend Engineer with 5 years building production Python services on FastAPI, PostgreSQL and asyncio. Currently owns a production RAG pipeline on Azure and OpenAI for a UK benefits platform, answering in under 3 seconds over 500+ documents, and cut slow API responses from 20 seconds to under 2. Strong in rule-driven SaaS backends, third-party integrations, query optimization, pytest-driven testing, and serverless pipelines on AWS and Azure.

SKILLS

Languages: Python, TypeScript, Swift

Backend: FastAPI, REST APIs, asyncio, Node.js, OAuth2, RBAC

AI / LLM: OpenAI API, RAG, LangChain, embeddings, vector search

Data: PostgreSQL, MongoDB, Azure Cosmos DB

Cloud and DevOps: Azure Functions, AWS Lambda, Step Functions, Docker, GitHub Actions, CI/CD

Testing and Frontend: pytest, React

WORK EXPERIENCE

Kinly | Senior Backend Engineer

Aug 2025 - Present | Remote | UK benefits platform: Python, FastAPI, Azure, Cosmos DB, OpenAI

- Own the knowledge-base RAG pipeline end to end (Azure Functions ingestion and embedding, Cosmos DB vector search, OpenAI-backed FastAPI): 500+ documents indexed, answers in under 3 s.
- Scheduled ingestion for freshness: hourly incremental ingest plus a weekly full resync and external web crawl, staggered into the lowest-traffic window.
- Eliminated latency spikes for ~270 users by tuning the API and adding a second uvicorn worker: windows with p95 over 2 s fell from up to 13 a day to 0, business-hour p95 from 1.0-1.7 s to 0.5-0.7 s.
- Cut requests over 3 s by 80%+ (up to 3,900 a day down to 469), health-check 503s from up to 30 a day to 0, and autoscale instance churn by half, with no new errors.
- Took the slowest endpoints from 20 s to under 2 s by eliminating N+1 queries and tuning database queries and async I/O, guarded by a 1,400+ test pytest suite.
- Shipped eligibility-form prepopulation from website enquiries via HubSpot and Cosmos DB: agent-open trigger, config-driven mappings across 8 field groups, and freeze rules that protect agent edits from automation.
- Authored the post-incident review for a 65-minute production outage caused by Key Vault references resolving empty after a slot swap, with root cause, recovery runbook and 12 corrective actions.

Rayna Corp | Full Stack Engineer

Oct 2025 - May 2026 | Remote | TypeScript, Express, TypeORM, React, AWS

- Built a dedicated AWS Lambda for TypeORM migrations that runs idempotently at 3 points: every staging deploy, the end of the nightly replication Step Function, and behind an approval gate in production.
- Moved migrations off an API Gateway endpoint capped at 30 seconds onto Lambda's 15-minute window, so long schema changes stopped timing out.
- Redesigned onboarding for law-firm admin users, replacing two conflicting verification and password emails with a single verify-and-set-password flow.
- Shipped platform features across React and Express, including cross-tab cache synchronization and bulk provider connection management.

Epiisa | Software Engineer

Sep 2021 - Jul 2025 | Sarajevo, Bosnia and Herzegovina

- **E-Advokat (legal AI agent):** built a LangChain and ChromaDB RAG pipeline that answers legal questions with citation-level attribution, with OCR ingestion of statutes and court rulings served through FastAPI.
- **CueLoop (AI email and calendar assistant, live at cueloop.cc):** built FastAPI services on Google APIs via OAuth2, with LLM draft generation, meeting detection and embedding-based semantic search over email threads.

- Engineered an asyncio task engine for minute-level polling and concurrent background jobs across parsing, scheduling and indexing.
- Built secure multi-tenant FastAPI services with PostgreSQL and MongoDB schemas, token-based authentication and RBAC.
- Designed a dynamic-programming pricing engine that optimizes rental rates from regional usage patterns (Vroomski).
- Ran CI/CD with Docker Compose and GitHub Actions, maintained pytest coverage, and delivered Next.js frontends where products needed them.

Rapidfacture GmbH | **Full Stack Engineer (Contract)**
Jan 2025 - May 2025 | *Remote*

- Built an e-commerce platform for industrial clients with real-time quoting, part configuration and inventory synchronization.
- Automated backend workflows in Python, including CAD file parsing, PDF generation and email handling.
- Extended Node.js APIs and a custom CRM, replacing brittle legacy logic with modular, testable services.

Epifront | **Software Engineer**
Sep 2023 - Sep 2024 | *Sarajevo, Bosnia and Herzegovina*

- Led development of Spacerra, a hosting automation platform offering no-code deployment and generated CI/CD pipelines.
- Built modular FastAPI services with PostgreSQL and MongoDB schemas, authentication and RBAC.
- Built containerized environments and Git-triggered Docker pipelines with infrastructure-as-code tooling.

PROJECTS

Indie iOS apps, designed, built and shipped solo to the App Store in Swift:

- **Morsel:** AI food journal that resolves free-text meals through personal history, a 13,660-food USDA database and on-device Apple Intelligence, synced via iCloud with no backend.
- **Proof:** focus and app-blocking app where users set a goal, lock in, then attach proof of what they accomplished.
- **Pilot:** controls a Mac from the iPhone over the local network, with live trackpad and keyboard as the paid tier.
- **Kandilj:** prayer-times app for Bosnia, localized into German and Swedish for diaspora users.
- **Couch:** universal TV remote over the local network, with weekly, yearly and lifetime StoreKit plans.

EDUCATION

BSc Information Technologies | International Burch University, Sarajevo

CERTIFICATIONS

Machine Learning (Stanford Online) | AI Programming with Python (Udacity, AWS) | AWS Machine Learning Foundations (Udacity, AWS) | Data Analytics with Python (IBM) | Introduction to Back-End Development (Meta)

LANGUAGES

English (full professional) | Arabic (native) | Bosnian, Croatian, Serbian (native)