

ISLAM BADRAN

Backend Engineer · AI & APIs · Node.js / Python

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PROFESSIONAL SUMMARY

Backend engineer with 3+ years of experience shipping production AI products and APIs across SaaS, EdTech, and automation platforms. Hands-on building with **Claude and OpenAI** — RAG pipelines, AI agents, function-calling tools, and Claude-assisted development workflows that move features from idea to production faster. Strong fundamentals in **Node.js, Python, PostgreSQL, and async systems** (Celery, BullMQ, Redis), with end-to-end ownership from API design and schema modeling to Dockerized deployment, CI/CD, and post-launch monitoring. Effective async communicator across fully remote, distributed teams.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL

Backend: Node.js, Express, NestJS, Django, Django REST Framework, FastAPI, Bun

AI & LLM Engineering: Claude (Anthropic) & OpenAI APIs, RAG pipelines, embeddings & vector search, AI agents, tool/function calling, prompt engineering, streaming responses

Databases & Storage: PostgreSQL, MySQL, MongoDB, Redis, AWS S3 — schema design, query optimization, ORMs (Sequelize, Mongoose, Django ORM)

APIs & Real-time: REST, WebSocket, Socket.IO, OpenAPI/Swagger, Webhooks, Stripe, WhatsApp Cloud API, Zapier

Async & Background Jobs: Celery, Redis Queue, BullMQ

DevOps & Cloud: Docker, Linux, Nginx, GitHub Actions (CI/CD), AWS (EC2, S3), DigitalOcean, Render, Vercel

Scraping & Automation: BeautifulSoup, Scrapy, Selenium, Playwright, Cloudflare bypass, scheduled crawlers

Practices: Code review, testing, system design, Agile/Scrum, async remote collaboration

PROFESSIONAL EXPERIENCE

Backend Engineer (Part-Time)

Feb 2025 – Present

Critical Future

Remote

- Shipped **AI-powered features end-to-end** using Claude and GPT models — integrated LLMs into the platform's email editor for AI-driven draft generation, reducing user composition time by an estimated **40%**.
- Designed and shipped scalable **REST APIs and WebSocket services** powering real-time editor collaboration, streaming LLM responses, and intelligent drafting under production load.
- Built a **Zapier integration** exposing platform actions and triggers, unlocking automation across **5,000+ third-party apps** for end users.
- Optimized API response times and connection handling using **Redis caching, connection pooling, and rate limiting**; collaborated with frontend, design, and QA in async-first remote workflows.
- Used **Claude as a development co-pilot** to accelerate boilerplate, scaffolding, and test generation — reviewing all AI-generated code critically before merging.
- Stack:** Node.js, Express, MongoDB, Redis, Docker, AWS S3, WebSocket, OpenAI & Anthropic APIs, Zapier.

Backend Engineer

Mar 2024 – Jan 2025

Eduneer.net

Remote

- Developed core features for an online teaching platform — **course scheduling, progress tracking, and instructor coordination** — used by hundreds of active students and teachers.

- Built secure REST APIs with **Django REST Framework and FastAPI**, covering authentication, role-based access, and structured data flow between services.
- Implemented **Celery + Redis** pipelines for asynchronous email delivery and report generation, removing long-running tasks from the request cycle and improving p95 latency.
- Containerized services with **Docker** and configured **GitHub Actions CI/CD** to standardize deployments and reduce release time.
- Partnered with frontend engineers to define API contracts, document endpoints in Swagger, and align on data shapes for a consistent UX.
- **Stack:** Django, DRF, FastAPI, PostgreSQL, Redis, Celery, Docker, GitHub Actions.

Freelance Backend Developer

Independent Contractor

2022 – Present

Remote (Global)

- Built and shipped **AI-powered features across multiple client projects** — integrating **Claude (Anthropic) and OpenAI** into chatbots, RAG-based knowledge tools, and content-generation features with prompt engineering, function calling, and structured output handling.
- Designed and deployed **large-scale web scraping pipelines** for data aggregation, market research, and lead generation — handling pagination, rate limiting, retries, anti-bot mitigation (Cloudflare bypass), and scheduled crawls feeding into Postgres for downstream analytics.
- Delivered end-to-end backend systems for clients across **EdTech, eCommerce, and SaaS**, with documented APIs, Dockerized environments, and integrations with **Stripe, Firebase, and AWS S3**.
- Deployed and maintained services on **DigitalOcean, Render, and Vercel**, configuring CI/CD pipelines and monitoring for reliability.
- **Stack:** Django, FastAPI, Node.js, PostgreSQL, Celery, REST APIs, Claude & OpenAI, BeautifulSoup, Scrapy, Selenium, Stripe, Firebase, Docker.

SELECTED PROJECTS

Knowledge-Grounded Chatbot API — Django REST Framework backend powering a multilingual RAG chatbot with Claude/OpenAI and WhatsApp Cloud integration. github.com/islam302/chatbot_api

- Designed a **tiered RAG pipeline** (curated Q&A bank → document retrieval → fallback) with cosine-similarity matching, configurable thresholds, and provenance tracking on every response.
- Built a **provider-agnostic LLM and embeddings layer** supporting Anthropic (Claude) and OpenAI behind a single service interface; runtime-swappable via environment config.
- Implemented automated document ingestion: parse → chunk → embed → persist, with auto-embedding on Q&A creation via Django post-save signals.
- Integrated **Meta WhatsApp Cloud API** (webhook verification + outbound messaging) and shipped JWT auth with token blacklist, OpenAPI 3 schema, and Swagger/ReDoc docs.
- **Stack:** Django 5, DRF, PostgreSQL, Anthropic & OpenAI APIs, NumPy, drf-spectacular, simplejwt, WhatsApp Cloud API.

AI-Powered Email Editor — Backend for a Claude/GPT-based email composition tool: prompt orchestration, streaming responses over WebSocket, and rate-limited LLM access per user tier.

Automation & Integration Layer — Zapier app exposing platform triggers and actions with OAuth authentication and webhook delivery guarantees.

LANGUAGES

Arabic (Native) · **English** (Professional Working Proficiency)