

Hasnain Ali

Backend Engineer

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Profile

Backend Engineer with over 3 years of experience building and scaling data-intensive applications with Python and Django. Skilled in optimizing databases like PostgreSQL and Neo4j, managing AWS cloud infrastructure, and integrating machine learning services to build smarter products.

Skills & Technologies

- **Languages:** Python, JavaScript, SQL
- **Backend Frameworks:** Django, Flask, Node.js (Express)
- **Databases:** PostgreSQL, MongoDB, MySQL, Neo4j, ChromaDB (Vector)
- **Cloud & DevOps:** AWS (EC2, S3, ECS, Lambda, Bedrock, SageMaker), CI/CD, Docker, Vercel
- **AI/ML:** Frontier APIs, LangChain, TensorFlow, PyTorch, LLMs, Agentic AI, RAG
- **Frontend:** React, HTML5/CSS3, Tailwind CSS, Bootstrap

Experience

Software Engineer | DEVSINC | OCT 2024 – PRESENT

- Build and maintain the backend services for data-intensive NLP applications, processing large volumes of text to power analysis tools for enterprise clients.
- Designed and implemented a knowledge graph in Neo4j that improved query performance on complex, interconnected data by 35%.
- Optimized data processing workflows on AWS, cutting infrastructure costs by 20% while improving system reliability.

Associate Software Engineer | AMROOD LABS | MAR 2024 – OCT 2024

- Developed and optimized the primary Django backend for a mobile application, integrating PostgreSQL and AWS S3 for efficient, scalable data storage and retrieval.
- Automated attendance tracking and contract management workflows using OpenAI, reducing manual effort by 60%.

Founder & Lead Engineer | [2ndPlace](#) | Jan 2023 - Feb 2024

- Architected and launched a high-traffic hostel discovery platform, building a Django/PostgreSQL backend that achieved 99.9% uptime through an automated AWS CI/CD pipeline.
- Engineered a geolocation search API with Google Maps that cut average query latency by 80% using optimized indexing and caching.
- Led a cross-functional team of 14, driving the product roadmap from concept to a successful public launch.

FULL-STACK ENGINEER (INTERNSHIP) | ARBISOFT | JUN 2024 – AUG 2024

- Developed a **Django-React** web application with **PostgreSQL**, focusing on full-stack development best practices.
- Optimized **database operations** for faster queries and implemented **bulk data insertion** via load data operation.
- Gained hands-on experience in **frontend development (using React)**, **backend API design**, and **database optimization**.

Projects

Vaultoniq | Fleet & Employee Management System | <https://app.vaultoniq.com/>

Tech Stack: Python (Django), PostgreSQL, AWS S3, React Native, OpenAI API, Ruby on Rails, Docker

- Overhauled the primary Django backend for a mobile application, integrating PostgreSQL and AWS S3 for more efficient and scalable data storage.
- Automated attendance and contract workflows with OpenAI, reducing manual processing by 60%.

AutoGen - Client Project

Tech Stack: Python, LangChain, PostgreSQL, Vector DBs (ChromaDB), OpenAI API, Gemini API

- Developed a comprehensive framework for building and evaluating Retrieval-Augmented Generation (RAG) systems, focusing on user-controlled performance and security. The system allows non-expert users to deploy custom chatbots based on their proprietary documents.
- **System Architecture & Efficiency:** Designed a scalable, multi-tenant architecture where individual user data and document chunks are isolated. Optimized the retrieval pipeline by allowing users to select specific documents for querying, significantly reducing search space and improving response latency.
- **Model Benchmarking & Configuration:** Implemented a control interface for A/B testing different LLMs (OpenAI, Gemini) and vectorization models. This allows for systematic evaluation of cost, speed, and accuracy trade-offs. Users can configure system parameters, including model temperature and response mode (permissive vs. restrictive), to align with their specific use case.
- **Security & NLP Integration:** Integrated NLP modules for **PII (Personally Identifiable Information) detection** to redact sensitive data before processing and **intent detection** to route queries more efficiently. All conversational data is logged in a structured PostgreSQL database for audit and analysis.

EDUCATION

Bachelors in Computer Science

Comsats University Islamabad (CUI) | CGPA — 3.33