

MUHAMMAD USMAN

Python Backend Engineer · Microservices · Healthcare Systems

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PROFESSIONAL SUMMARY:

Python Backend Engineer with 3.5+ years of experience building scalable backend systems, microservices architectures, and healthcare integrations. Proven expertise in designing high-performance APIs, asynchronous processing systems, and event-driven architectures using Django, FastAPI, and Flask.

Strong background in EHR/EMR integrations, distributed systems, and backend automation, with hands-on experience in Redis caching, message queues (RabbitMQ), and background job processing (Celery).

Focused on writing clean, scalable, and production-grade systems with an emphasis on performance optimization, system reliability, and real-world problem solving in healthcare AI environments.

CORE EXPERTISE:

Backend & Architecture:

Microservices Architecture · Monolith to Microservices Migration · REST APIs · Async Processing · Event-Driven Systems · Background Jobs

Languages & Frameworks:

Python · Django · FastAPI · Flask

Databases & Storage:

PostgreSQL · MySQL · MongoDB · DynamoDB · Query Optimization · Indexing · Transactions (ACID)

Caching & Messaging:

Redis (Caching & Queues) · RabbitMQ · Celery

Cloud & DevOps:

AWS (S3, Basic Infrastructure) · Docker · Linux

Automation & Scripting:

Python Automation · Selenium · Workflow Automation

Healthcare Systems:

EHR / EMR Integrations · Secure Patient Data Handling

PROFESSIONAL EXPERIENCE:

Python Backend Engineer · EHR Integration Specialist

SaveLife.ai — Karachi, Pakistan

Jun 2023 – Present

- Designed and developed scalable backend systems using FastAPI and Django for healthcare AI applications
 - Contributed to microservices-based architecture, enabling modular and independently deployable backend services
 - Built and maintained secure REST APIs for patient data exchange, ensuring reliability and compliance
 - Implemented Redis caching strategies to reduce database load and improve API performance
 - Integrated RabbitMQ for asynchronous task handling and inter-service communication
 - Developed background job processing systems using Celery for long-running and scheduled operations
 - Designed event-driven workflows to decouple services and improve system scalability
 - Optimized PostgreSQL queries using indexing and performance tuning techniques
 - Ensured data consistency using transactions and ACID-compliant workflows
 - Automated operational workflows using Python scripting to improve efficiency
 - Collaborated with cross-functional teams (frontend, QA, product) in an agile environment
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Python Backend Developer

HNH Tech Solutions — Karachi, Pakistan

Jan 2021 – May 2023

- Developed backend systems and RESTful APIs using Django and Flask for web and mobile applications
- Designed scalable backend architectures for multiple client projects across different domains
- Integrated third-party APIs and external services into production systems
- Built automation tools using Python and Selenium, reducing manual effort and improving workflows
- Optimized backend performance through query tuning and efficient data handling
- Worked with relational and NoSQL databases including PostgreSQL, MySQL, and MongoDB
- Participated in code reviews and maintained clean, maintainable codebases following best practices

KEY ENGINEERING HIGHLIGHTS:

- Hands-on experience with microservices-based system design and distributed architectures
- Built async processing systems using Celery, Redis, and RabbitMQ
- Improved backend performance through caching, query optimization, and indexing
- Designed event-driven systems for scalable and loosely coupled services
- Experience working with high-sensitivity healthcare data and integrations
- Strong understanding of backend scalability, performance, and system reliability

LANGUAGES:

English — Intermediate
Urdu — Native

INTERESTS:

Backend Architecture · Distributed Systems · Automation · AI-driven Systems