

HASSAAN AHMAD

SOFTWARE ENGINEER

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OBJECTIVE

Results-driven Software Engineer with 2+ years of experience designing and implementing scalable backend systems and multi-tenant architectures. Demonstrated expertise in API development, building LLM-powered agentic workflows, crafting efficient REST APIs, and optimizing database performance for complex, data-intensive applications. Experienced in leading small engineering teams, practicing test-driven development, collaborating cross-functionally, and delivering clean, maintainable code aligned with business goals. Passionate about leveraging AI and modern backend technologies to build intelligent, real-world solutions.

PROFESSIONAL EXPERIENCE

Folium Ai

Software Engineer

Lahore, Pakistan
Aug 2025 – Present

- **Team Leadership:** Led back-end team, overseeing code reviews, task delegation, and technical decision-making across multiple projects using test-driven development practices.
- **Multi-Tenant Architecture:** Designed and developed scalable multi-tenant back-end systems in Django, ensuring data isolation, security, and performance across client environments.
- **AI & LLM Integration:** Built LLM-powered agentic workflows into academia and medical applications using Lang-chain and Lang-graph, enabling intelligent automation and domain-specific decision-making.
- **Identity & Access Management:** Implemented user authentication and authorization using AWS Cognito, managing multi-tenant user pools and role-based access control.
- **API Development:** Designed and led API development to create robust and scalable backend services with comprehensive test coverage and continuous deployment pipelines.
- **Database Design:** Architected PostgreSQL schemas optimized for scalability, data integrity, and query efficiency across complex domain models.
- **Third-Party Integrations:** Integrated external services and APIs to extend application functionality and streamline business workflows.
- **Performance Optimization:** Improved application performance through query optimization, indexing strategies, and caching mechanisms.

Tech Stack: Python, Django, PostgreSQL, Lang-chain, Lang-graph, AWS Cognito.

Cogent Labs

Backend Engineer

Lahore, Pakistan
June 2024 – Aug 2025

- **Backend Architecture and Development:** Developed modular and maintainable backend architectures using Django, optimizing performance and scalability to handle high-volume requests and complex business logic.
- **Data Pipeline Development:** Implemented scalable data pipelines for real-time data processing, ensuring efficient aggregation and transformation of large datasets for analytical and business insights.
- **Performance Improvements:** Enhanced query response times by 80% using TimescaleDB, caching strategies, and raw SQL queries.
- **Continuous Deployment:** Established continuous deployment pipelines on AWS using Docker and Nginx, enabling rapid, reliable application updates with zero-downtime releases.
- **AI Integration:** Integrated machine learning and AI models into backend systems to enhance functionality, providing intelligent automation and data-driven decision-making in various applications.
- **Scalability and Deployment:** Built scalable applications serving real-time users. Deployed projects on AWS using Docker and configured Nginx for serving web applications and load balancing.
- **Code Quality:** Updated utilities to align with Python PEP 8, focusing on clean, maintainable, and high-performance code with test-driven development to ensure code reliability.

Tech Stack: Python, Django, MySQL, PostgreSQL, TimescaleDB, Django-channels, Docker, Nginx, AWS.

Apex Space

Software Engineer

Lahore, Pakistan
Jan 2023 – Oct 2023

- **Web Application Development:** Designed and developed web pages for diverse web applications, ensuring seamless functionality and user experience.

- **E-commerce and Business Platform Expertise:** Contributed to the development of E-commerce and business platform websites, focusing on performance and scalability.
- **Full-Stack Design and Implementation:** Specialized in creating responsive front-end designs and developing scalable back-end systems to meet dynamic user needs.
- **API Development:** Led API development initiatives to create robust and scalable backend services integrated with third-party providers.

Tech Stack: Python, Django, PostgreSQL, React.

EDUCATION

University of Engineering and Technology, Lahore

Bachelor of Computer Science

Lahore, Pakistan

Oct 2020 – May 2024

PROJECTS

University Service Portal

- **Centralized Information:** Combines scattered university data into one platform, simplifying access for students, faculty, and staff.
- **Streamlined Processes:** Automates and simplifies tasks like course registration, fee payments, and document submissions, reducing inefficiencies.
- **API Development:** Led API development for real-time updates and seamless third-party service integration using test-driven development to ensure code reliability.
- **Deployment:** Deployed using Docker and Nginx for load balancing and serving web application traffic efficiently.

Tech Stack: MERN Stack

TECHNICAL SKILLS

Languages: Python, JavaScript, C++

Frameworks & Libraries: Django, Scrapy, React

Backend & API Development: REST API Development, Webhooks, Test-Driven Development (TDD)

DevOps & Cloud: Docker, Kubernetes, Nginx, Continuous Deployment (CI/CD), AWS, Azure, Firebase

Databases: PostgreSQL, MySQL, MongoDB, TimescaleDB

Payment Integrations: Stripe

ACHIEVEMENTS

- Participated in Google Cloud Program Sept 2021
- Contributed in Hacktoberfest Program Oct 2022
- Student Ambassador at Cogent Labs Jan 2023 – Jan 2024

LEADERSHIP EXPERIENCE

BDS UET-New Campus

President

Sep 2023 – May 2024

- Led the BDS student chapter, organizing events, workshops, and competitions for student development and knowledge enhancement.
- Managed and mentored teams, focusing on personal and professional growth.

BDS UET-New Campus

Treasurer

Oct 2022 – Jun 2023

- Managed event finances, coordination, and billings for BDS events at the university.
- Worked closely with team members to ensure the success of events, focusing on quality and impact.