Usama Tahir

Senior Software Engineer

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PROFILE

Senior Software Engineer | Python Backend Developer | REST API Specialist
Skilled in building scalable backend systems and RESTful APIs using Django, Flask, and FastAPI. Experienced in designing high-performance architectures, optimizing databases, and developing secure, maintainable services in microservices environments.

PROFESSIONAL EXPERIENCE

Senior Software Engineer   11/2020 – Present
FiveRivers Technologies   Lahore, Pakistan

Worked as a REST API developer for critical machine learning and data infrastructure projects, delivering scalable backend services for data ingestion, preparation, cataloging, and metadata management.

Current Project:
- Currently working on a Data Engineering–focused ETL project, enhancing its backend architecture to efficiently ingest data from various sources, apply necessary transformations, and deliver to multiple destinations, ensuring accuracy and performance across the pipeline.
- Collaborating on the frontend using React.js, implementing dynamic UI components, integrating RESTful APIs, and ensuring a responsive and consistent user experience across devices.
- Designing and maintaining scalable, high-performance backend services using a microservices architecture, built with Python frameworks such as Django, Flask, and FastAPI.

A few notable projects include:
- **Ballogy:**
  - A mobile application for basketball coaches and players with features including workout and task and workouts submissions, scoring, messaging, announcements, and profile handling.
- **DataPrep:**
  - Core service for exploring, cleaning, and preparing structured and unstructured data for analysis, reporting, and machine learning in AI projects.
- **Dataset-Catalog:**
  - Core service managing information on datasets used by different services and ingested at storage.
- **ML-Meta Store:**
  - Core service tracking activities conducted by data scientists.
- **Foundation Data Ingest:**
  - Desktop utility offering connectors to transfer data between services.
- **Hermes:**
  - Developed a core service to ingest high-volume time series data from sensors, process it through data cleaning pipelines, and run ML models for fault detection in oil & gas industries and weather prediction in environmental sectors.

Achievement Highlights:
Joined FiveRivers as a **Software Engineer** and promoted to **Senior Software Engineer**.

Being Senior Software Engineer involves the following Responsibilities:
- Developing and maintaining scalable RESTful APIs using Django, Flask, and FastAPI within a microservices-based architecture, ensuring high performance and security standards.

- Designing and optimizing PostgreSQL database schemas with advanced queries, indexing strategies, and data migrations to support distributed services.
- Collaborating with cross-functional teams to integrate third-party services and internal tools across microservices, enhancing platform capabilities and user experience.
- Played a key role in scaling backend infrastructure to efficiently handle increased user traffic and inter-service data throughput.
- Participating in backend architecture planning within a modular microservices framework, improving code quality through refactoring, documentation, and unit testing.
- Contributing to CI/CD pipeline enhancements, implemented API versioning strategies, and integrated system monitoring tools to maintain reliability and uptime across services.
- Working closely with the frontend team, integrating APIs and building key user-facing features using React.js, ensuring consistent functionality and responsive design.

Senior Software Engineer
Heuristiks Tech

07/2023 – 12/2023
Lahore, Pakistan

Worked on various projects using **Python** and **Django REST Framework**, with a focus on developing robust backend APIs, designing relational databases with **PostgreSQL**, and integrating scalable backend solutions. Actively collaborated with the development team to deliver clean, efficient, and maintainable code for production-ready applications.

Software Engineer
Native Brains

11/2020 – 01/2022
Karachi,
Pakistan (Remote)

Part-time Backend Developer at Native Brains, where I debugged and enhanced Django-based REST APIs for the Paybag Android app—a user-friendly platform that connects you with travelers to ship items affordably, bypass courier fees, and communicate directly—while ensuring scalable, high-performance, and secure backend services.

Research Officer
Al Khawarizmi Institute Of Computer Science, UET Lahore

06/2017 – 10/2020
Lahore, Pakistan

Worked as a backend developer for high-impact big data projects, delivering scalable services for data crawling, visualization, ad serving, search functionality, and surveillance systems while ensuring top-tier performance and security standards.

A few notable projects include:
- **Humkinar Urdu Search Engine:**
  - Humkinar is an online platform providing real-time search and discovery of comprehensive Urdu-language content. I worked on developing scalable Python crawlers to mine structured and unstructured Urdu content (blogs, news sites, articles, books), indexed it in Apache Solr for real-time search, and integrated Redis for caching recent news and articles on the Humkinar portal.
- **Humkinar Adserver:**
  - Developed a real-time ad creation, costing, and display system integrated into the Humkinar Urdu search engine.
- **Humkinar Search Service:**
  - Developed a real-time search service APIs for Humkinar and a payment plan with request limiting.
- **Epidemic Surveillance System:**
  - Built real-time Twitter ingestion pipelines with the Twitter API to collect and classify large-scale health-related tweets via an epidemic classifier model, and developed backend APIs and database schemas to power a dashboard for regional outbreak detection.
- **Political Sentiment Analysis System:**
  - Developed a real-time Twitter scraping service using Twitter APIs to gather large-scale political tweets, processed them through a sentiment analysis model to assess party sentiment, and visualized trends by region on a dashboard with positive/negative reviews. Led backend development, wrote APIs, and managed databases for the service.

My roles and responsibilities includes:
- Played a key role in scaling backend infrastructure to handle increased user traffic and data throughput efficiently.

- Participated in backend architecture planning and code quality improvements, including refactoring, documentation, and unit testing.
- Contributed to CI/CD pipeline enhancements, API versioning strategy, and system monitoring tools to ensure system reliability and uptime.

EDUCATION

B.Sc. Computer Science (Honours)   11/2013 – 06/2017
University of Engineering and Technology, Lahore   Lahore, Pakistan
I secured CGPA of **2.95** out of **4.0**

Intermediate (Fsc. Pre-Engineering)   07/2011 – 08/2013
Govt. Islamic College Civil Lines, Lahore   Lahore, Pakistan
Obtained **907/1100** marks securing **82.45%**

Matriculation   05/2009 – 07/2011
Govt. Saint Francis High School, New Anarkali   Lahore, Pakistan
Obtained **923/1050** marks securing **87.9%**

SKILLS

Python	Django
Flask	FastAPI
React JS	PostgreSQL
AWS EC2	AWS RDS
Data Mining	WEB Scraping
Linux OS	REST APIs
Selenium Automation	Microservices

LANGUAGES

English ● ● ● ● ○
IELTS **7.0** overall

Urdu ● ● ● ● ●

Punjabi ● ● ● ○ ○

EXPERTISE

- Teamwork
- Effective Communication
- Problem Solving
- Time Management
- Critical Thinking
- Leadership

TOOLS & TECH

- JIRA
- Trello
- Pycharm
- Postman
- Docker
- GIT
- Clickup
- Asana
- VS Code
- Insomnia
- AWS
- Jenkins

CERTIFICATES

Python (Basic)   **REST API (Intermediate)**
HackerRank 2020   HackerRank 2020