VAIBHAV SRIVASTAVA

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Professional Summary

Software Developer with 3+ years of experience in backend systems using FastAPI, Flask, and AWS. Proficient in advanced Python including asynchronous programming, multithreading, and multiprocessing. Skilled in secure API development, CI/CD, containerization, and cloud-native services with a strong foundation in data engineering and visualization tools.

Technical Skills

Backend: Python (AsyncIO, Multithreading, Multiprocessing), FastAPI, Flask, Django, REST/gRPC APIs, SQLAlchemy, Celery, Pytest, OAuth2.0
Data Handling: Pandas, NumPy, Regex, PostgreSQL, MySQL, MongoDB, Redis (Caching), Cassandra (basic)
API & Security: RESTful APIs, GraphQL (basic), OAuth2.0, SAML (basic), WebSocket
Cloud & DevOps: AWS (Lambda, EC2, S3), Docker, GitHub Actions, GitLab CI, CI/CD pipelines
Architecture: Microservices, Distributed Systems, Event-Driven, Load Balancing, Async Systems
Containerization: Docker, Kubernetes (familiarity), Serverless (AWS)
Data Visualization: Power BI (DAX, Power Query, API), Tableau (basic)
AI/ML (Projects): LLMs, RAG, LangChain, OpenAI GPT, Hugging Face, Ollama

Work Experience

Facts Online | Software Developer   May 2023 - Present

- Built high-traffic APIs using FastAPI and Flask, reducing latency by 40% through Redis caching and query optimization.
- Designed a **microservice architecture** handling 10K+ RPM (requests per minute) for a financial platform, improving scalability.
- Collaborated with frontend teams to integrate ReactJS dashboards, enabling real-time analytics for 50K+ users.
- Led **production deployments** with zero-downtime using Docker + AWS, maintaining 99.9% uptime SLA.
- Developed 8+ modular **REST APIs** (FastAPI/Flask) with OOP principles, reducing code redundancy by 35%.

Research & Analytics Solutions | Python Developer   Nov 2022 - Apr 2023

- Built scalable **web scraping** pipelines using **Selenium WebDriver** to extract data from dynamic, JavaScript-heavy sites with login and **pagination**.
- Processed and transformed large datasets using **Pandas**, **NumPy**, and **regex**, storing results in **PostgreSQL/MongoDB** for real-time analytics and reporting.
- Worked with **asynchronous** Python functions and multithreaded API calls to handle high-concurrency server tasks.

Projects

FinTrackPro – Loan Management Platform   Feb 2025 - Present

- Engineered a scalable fintech backend using Flask, React.js, and SQLAlchemy; deployed on AWS (EC2, RDS, Lambda).
- Integrated **Razorpay payment system** to streamline secure transaction processing for loan management.
- Reduced deployment time 50% using Dockerized **CI/CD pipelines**.
- Optimized PostgreSQL queries, cutting report generation time 30% for 100K+ loan records.

Zonal Excellence System – Real-Time Employee KPI Analytics Platform   Nov 2023 – Mar 2024

- Developed an **API-driven analytics** platform using Python and FastAPI to visualize zone-wise and employee-wise KPI metrics with real-time ranking filters.
- Implemented **PostgreSQL with optimized OR**M queries and LDAP authentication to ensure secure and scalable data access.
- Integrated **asynchronous** endpoints and Redis caching, reducing 80% reporting latency across 22 business zone.
- **Containerized** the application using Docker and deployed on Linux servers with **GitLab CI/CD pipelines**, maintaining 99.9% uptime.

Certifications

- AWS Cloud technical Essentials (Coursera)
- Full Stack Data Science 2.0 (iNeuron.ai)

Education

GLA University, Mathura   **July 2017 - May 2021**
Bachelor of Technology in Civil Engineering Mathura, UP, India
- Relevant coursework: Data Structures, Algorithms (self-taught)

Key Projects & Contributions

Zonal Excellence System – Employee KPI Analytics Platform
Built an API-driven platform to display zone-wise and employee-wise performance metrics with ranking filters.
- **Tech Stack:** Python, FastAPI, Linux, Docker, REST APIs, PostgreSQL, LDAP Authentication, ORM
- **Achievement:** Enabled business teams to access real-time KPI insights, reducing reporting delays by 80%.

Unified Health Check – Real-Time Server Monitoring
Developed a modular backend to monitor Vodafone Idea's nationwide servers in real-time with API-driven health reports.
- **Tech Stack:** Python, FastAPI, PostgreSQL, Linux, Docker, REST APIs, React.js
- **Achievement:** Reduced server downtime detection time by 60%, improving operational efficiency across 22 telecom circles.

Radio Sub Network (RSN) Automation
Built an automation system to manage RSN configurations and workflows, minimizing manual intervention.
- **Tech Stack:** Python, FastAPI, PostgreSQL, Linux, REST APIs
- **Achievement:** Cut RSN configuration time from hours to minutes, saving 100+ man-hours monthly.

AI Chat Bot with RAG – Context-Aware AI Assistant
Developed a GenAI-powered assistant by fine-tuning LLaMA-2 with Retrieval-Augmented Generation (RAG) to provide real-time, context-aware responses using vector databases.
- **Tech Stack:** Python, Langchain, LLaMA-2, RAG, Redis (Vector DB), PostgreSQL, Docker, embeddings
- **Achievement:** Improved response accuracy by 60% compared to rule-based systems through Redis vector caching and dynamic model pipeline optimization; reduced response latency by 25% with production deployment.

Ed-Tech-AI – Intelligent Quiz Generation & Learning Analytics Platform
Developed an AI-powered platform to auto-generate personalized quizzes and track learner performance through intelligent analytics.
- **Tech Stack:** Python, GPT-3.5, FastAPI, Tesseract OCR, NLP, PostgreSQL, Redis, REST APIs
- **Achievement:** Generated 1,000+ adaptive quizzes with GPT-3.5, boosting learner engagement by 85%. Achieved 70% noise reduction in text extraction via custom OCR+NLP pipeline and delivered 95% accuracy in real-time performance tracking.

Automated Web Scraping & Data Extraction
Created Selenium-based scrapers handling authentication, pagination, and dynamic JavaScript content.
- **Tech Stack:** Python, Selenium, PostgreSQL
- **Achievement:** Automated data collection from 20+ sources, reducing manual data entry efforts by 90%.

IPTV Live Streaming Platform – Razorpay Integration
Developing a live streaming platform for cable providers to deliver channel packages similar to Zee/Star networks.
- **Tech Stack:** Python, Django, Razorpay API, PostgreSQL, Asynchronous
- **Achievement:** Implemented secure online payment gateway via Razorpay, enabling seamless subscription purchases and real-time payment status updates.

Network Monitoring System – Real-Time Device & Port Status
Developing an asynchronous system to monitor device and port status via SNMP and ping, with real-time updates using PostgreSQL triggers and listeners.
- **Tech Stack:** Python, Asyncio, SNMP, PostgreSQL, DSA, System Design, FastAPI Websocket
- **Achievement:** Designed scalable architecture enabling instant device status updates for a dynamic monitoring dashboard.