Jainam Shah

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Summary

- Software Engineer with experience building scalable backend, full-stack and systems using Java, Python, React and Spring Boot.
- Skilled at architecting low-latency, fault-tolerant microservices and automation pipelines on AWS, Docker and PostgreSQL, with caching, queues and observability for resilient performance.
- Strong foundation in AI agent development, RAG workflows and scalable system design focused on turning complexity into production-grade simplicity.

Work Experience

Software Engineer, *Syracuse University* *Jun 2024 – Jun 2025 | Remote, USA*

- Re-architected the university's course-registration platform to sustain 2000+ concurrent users and eliminate crashes that blocked class enrollment for 40-100 seat courses.
- Developed an internal chatbot assistant using **Python** and **OpenAI APIs** to handle student queries on course availability and registration status, automating 80% of repetitive helpdesk tickets.
- Enhanced a retrieval workflow that indexed university policy FAQs from PostgreSQL into vector embeddings using **FAISS**/**Chroma**, allowing students to get AI-generated answers from internal content in under 300 ms.
- Deployed a **Dialogflow** assistant connected to a **RAG** service layer using LangChain and FAISS for contextual lookups added logging and token-usage telemetry to monitor accuracy and latency.
- Enhanced **TypeScript**, **React** and JavaScript for real-time seat availability indicators via WebSocket streams, improving user experience scores in student surveys by 30%.
- Integrated **Python** based automation workflows to monitor queue depth and trigger auto-scaling policies on **AWS**, reducing manual intervention by 90%.
- Optimized **PostgreSQL** access patterns with new indexes and batched writes, boosting successful first-minute registrations from 35% to 90%.
- Automated deployment and load-testing pipelines **GitHub** Actions, **Docker** and Grafana for continuous performance validation and latency monitoring.
- Cut average latency from 30-60s to 3-5s by introducing **Redis** caching, async **RabbitMQ** queues and atomic seat-lock transactions, slashing **DB** load by ~45%.

Software Engineer, *Triz Innovation* *Jul 2021 – Jul 2022 | Gujarat, India*

- Redesigned the Academic Performance Analytics platform architecture, migrating from a relational **SQL** model to a **Neo4j** graph database, cutting complex query latency from 15s to under 2s for hierarchical academic data.
- Designed RESTful APIs in Java **Spring Boot** to expose analytics endpoints for course, chapter and student-level performance metrics, supporting dashboards used by 5+ institutions.
- Built responsive **React** interfaces and integrated with backend APIs, improving page load time by 35% and user task completion rates by 25% based on faculty feedback surveys.
- Collaborated cross-functionally in **Agile** sprints, defining 10+ KPIs and implementing **Splunk**-based monitoring to ensure continuous system health and alerting during production.

Software Engineer, *CogniTensor* *Jan 2021 – Jun 2021 | Delhi, India*

- Delivered demand-forecasting pipelines for a national retail client using **Python**, **Pandas** and **TensorFlow**, improving seasonal forecast accuracy by 35% across 12 months of sales data.
- Automated data-quality validation and anomaly detection with **SQL** + **PySpark**, cutting manual cleansing effort by 90% and ensuring reliable input for model training.

Technical Skills

Programming Languages: Python, Java, JavaScript (ES6+), TypeScript, SQL, C/C++
Databases: SQL (MS SQL Server, MySQL, PostgreSQL), NoSQL (MongoDB, Neo4j)
Web Development and Frameworks: HTML, CSS, React, Redux, Next.js, Spring, Spring Boot, JUnit, Node.js, JSON, REST API
Testing and Monitoring: JUnit, Mockito, Postman, Splunk
Cloud and DevOps: AWS (EC2, ECS, S3, RDS, Lambda), Docker, Kubernetes, GitHub Actions, Jenkins, Grafana, Prometheus
Tools and Practices: Git, Linux, Agile/Scrum, CI/CD Pipelines, REST & GraphQL APIs

Education

Master of Science, *Computer Science* *Aug 2022 – May 2024 | Syracuse, USA*
Syracuse University, College of Engineering & Computer Science

Projects

Jarvis – A Generative AI Assistant

- Directed the development of an end-to-end virtual assistant integrating over 30 functionalities, such as weather updates, media control, task scheduling, translation services and sending WhatsApp messages with voice assistant.
- Drove advanced OpenAI techniques using LLMs and LangChain, improving query accuracy by 40% and leveraged Go to write APIs for real-time updates, ensuring a seamless user experience with PyTorch and Scikit-learn.

LinkedIn Prototype

- Implemented a scalable, distributed full-stack application similar to LinkedIn, enhancing performance with AWS-hosted instances, leveraging Elastic Load Balancing, MongoDB sharding across servers, Redis caching and Kafka pooling resulting in a 2x increase in application responsiveness.