Sonali Vyas

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SUMMARY

Innovative and results-driven Software Engineer with 4+ years of experience at American Express, specializing in AI-driven backend systems, microservices, and cloud-native architectures. Currently pursuing an M.S. in Computer Science (STEM) from The University of Alabama, with a focus on AI, computer vision, and scalable system design. Skilled in leveraging AI/ML frameworks like PyTorch and FastAPI to build intelligent, secure, and production-ready systems. Passionate about applying artificial intelligence to security and large-scale systems at Meta.

EXPERIENCE

Senior Software Engineer I
American Express   **Sep 2021 – Jul 2025, Bangalore, India**
· Re-engineered high-traffic offer enrollment site using event-driven microservices (React, Apex, SOQL), reducing page load time by 30% and clicks by 40%.
· Built predictive AI tools leveraging Salesforce Next Best Action to auto-suggest resolutions, cutting response time by 40%.
· Developed secure APIs and automation frameworks integrated with multiple Amex systems, ensuring data integrity and compliance.
· Architected scalable, containerized deployments using Docker and GitHub Actions to improve CI/CD reliability.
· Collaborated with cross-functional teams to enhance platform security posture and operational efficiency.

Success Engineer
Salesforce Inc.   **Jan 2021 – Sep 2021, Hyderabad, India**
· Delivered customized Sales Cloud and Experience Cloud solutions for global clients, improving adoption by 30%.
· Partnered with clients to troubleshoot performance and security issues, strengthening data protection.

Project Engineer
Wipro   **May 2019 – Dec 2020, Jaipur, India**
· Developed an automated CPQ system using JavaScript and HTML, reducing quote generation time by 50%.
· Implemented web security best practices and optimized APIs for faster client delivery.

PROJECT

CrisisAssist AI
· Built a multi-agent system using CrewAI and LangGraph for real-time event detection and response.
· Implemented secure FastAPI backend with PyTorch models for AI inference; deployed on AWS with Docker and Kubernetes.
· Designed for security and scalability to handle mission-critical environments.

AmexTechHub
· Developed an AI-powered platform integrating Salesforce, Slack, and Confluence for document intelligence and recommendations.
· Improved internal collaboration and reduced manual data retrieval by 35%.

EDUCATION

Master of Science in Computer Science
The University of Alabama · Tuscaloosa, AL · May 2027

Bachelor of Technology in Computer Science (Honors)
Rajasthan Technical University · India · May 2019

SKILLS

Python, Java, Apex, C++

PyTorch, TensorFlow, LangGraph, CrewAI, FastAPI, Scikit-learn

REST APIs, Microservices, Event-Driven Systems, Flask, Spring Boot

Vulnerability Detection, Secure Coding, Cloud Security, API Hardening

AWS (EC2, Lambda, S3), Docker, Kubernetes, GitHub Actions

PostgreSQL, MySQL, SOQL