

Aditya Sethi

Senior Software Engineer | Agentic Systems & Applied AI

adityasethi0033@gmail.com | [+91-8050004940](tel:+91-8050004940) | [LinkedIn](#) | [Portfolio](#) | Bengaluru, KA

Summary

Backend Software Engineer with 4+ years of experience building autonomous systems, REST API integrations, and AI-enabled data applications. Deep expertise in Python, LangChain, and integrating Mixture-of-Experts (MoE) LLMs into production workflows. Proven ability to design secure, distributed software services that securely bridge natural language processing with proprietary enterprise databases.

Core Skills

Software Design & Architecture: Software Architecture & Design Patterns, SDLC (Requirements to Production), Microservices, Multi-Tenant Systems, High-Availability & Capacity Planning

Development & SDLC: Python, Bash, PowerShell, Object-Oriented Design, TDD, Code Reviews, Version Control (Git), CI/CD (GitHub Actions, GitLab CI)

Debugging & Troubleshooting: Root-Cause Analysis, Distributed System Diagnostics, Application & Error Log Analysis, Incident Troubleshooting, Performance Profiling

Database Applications: Aurora PostgreSQL, SQL, Data Modeling, ETL/ELT Pipelines, NLQ-to-SQL

API Integration: REST API Design & Integration, API Lifecycle Management, API Gateway, Service Contracts

Cloud Platforms: AWS (EC2, S3, VPC, Lambda), OCI/Cross-Cloud, Serverless Systems, IaC (Terraform), Zero-Downtime Releases

Security & Governance: Zero-Trust Architecture, IAM / JIT Access, Entra ID, Auth0, RBAC, Vulnerability Remediation (CVSS/CVE)

Professional Experience

Consultant (Forward-Deployed AI & Platform) Siemens Digital Industries Software — Bangalore, KA
December 2022 - Present

- Authored modular Infrastructure as Code (Terraform) for automated, version-controlled provisioning and environment parity across the SDLC, from development through production.
- Architected and implemented a multi-tenant serverless Angular application with Entra ID and Auth0, defining resilient API contracts and strict tenant isolation boundaries for alliance accounts.
- Designed and developed scalable software services for enterprise AI/ML workloads across 15+ production environments, applying microservices and multi-tenant architecture patterns on AWS (EC2, S3, VPC, Lambda, API Gateway).
- Built automated CI/CD pipelines via GitHub Actions and GitLab CI with quality gates and automated testing, enabling zero-downtime production releases of distributed application components.
- Engineered REST API integrations and API lifecycle management across internal and alliance-facing systems, establishing resilient service contracts that reduced integration defects.
- Developed Python automation utilities (AWS SSM) for system configuration and maintenance, cutting operational overhead and standardizing deployments across environments.
- Diagnosed and resolved complex failures across distributed application components, using application logs, CloudWatch metrics, and system telemetry for root-cause analysis and incident troubleshooting.
- Executed proactive vulnerability management and remediation (CVSS/CVE), hardening application and infrastructure security while maintaining ITAR/DLP compliance.
- Built an automated end-to-end data pipeline for operational metrics and system telemetry, slashing manual reporting by 90% and accelerating issue detection across services.

- Delivered a production-grade NLQ-to-SQL database application using LangChain over Aurora PostgreSQL with ~92% query accuracy, enabling business users to query enterprise data through natural language.
- Designed ETL/ELT data pipelines and database models supporting operational analytics, observability, and reporting across production systems.
- Engineered an event-driven, near real-time database replication pipeline utilizing application save hooks and REST APIs to capture delta updates from localized PostgreSQL databases, seamlessly synchronizing state to AWS Aurora to continuously power the NLQ-to-SQL reasoning engine.

Software Developer Intern Kongsberg Digital — Bangalore, KA Aug 2019 - Sept 2019

- Developed automated data preparation workflows and API integration utilities in Python, accelerating processing cycles by ~25% and applying disciplined software design and testing practices.

Projects

Autonomous Agentic Pipeline (OpenClaw) Lead Architect

- Engineered a headless, daemon-driven agentic pipeline on an Ubuntu VM to autonomously extract, semantically tailor, and compile unstructured HTML into structured PDF artifacts.
- Designed a dual-model LLM architecture (DeepSeek Flash for extraction, V4 Pro MoE for reasoning) to optimize inference speed and API costs.
- Implemented Delta Tailoring LLMops algorithms to bypass context-window truncation, achieving 100% JSON schema adherence and eliminating production parser crashes.

AWS SSM Zero-Trust Tunnel Connector Systems Engineer

- Engineered a lightweight, zero-install Windows desktop utility using Windows Forms, PowerShell, and VBScript to orchestrate secure port-forwarding sessions via AWS Systems Manager (SSM).
- Eliminated the need for legacy VPNs and bastion hosts by enabling encrypted, local-browser access to private-subnet web applications and direct RDP connectivity to isolated EC2 instances.
- Streamlined end-user access through a one-click GUI wrapper, obfuscating complex AWS CLI tunneling commands while enforcing strict IAM-based zero-trust security boundaries.

Education

B.E. in Information Science and Engineering Nitte Meenakshi Institute of Technology — Bangalore, KA
Graduated 2022

Certifications

- [AWS Certified Solutions Architect - Associate \(2025\)](#)
- [AWS Certified Cloud Practitioner \(2024\)](#)
- [Google Cloud Certified Professional Cloud Architect \(2020\)](#)
- [Siemens Certificate of Excellence \(2023\)](#)
- [NPTEL \(IIT Madras\) - Advanced Python Programming Certification \(Score: 97%\)](#)