

Summary

Experienced Software Engineer with 6+ years of expertise in building scalable, cloud-native applications using Java and Python. Proven track record of designing and deploying high availability systems across AWS, Kubernetes, and hybrid platforms with 99.9% uptime. Certified AWS Solutions Architect and Generative AI specialist, with hands-on experience in CI/CD pipelines, microservices, and React-based portals. Currently exploring and integrating Generative AI tools (LLMs, automation agents) to enhance system intelligence, automate tasks, and improve user experience. Committed to delivering high-quality, maintainable code while collaborating in Agile, cross-functional teams to drive seamless project execution.

Certifications

- [AWS Certified Solutions Architect – Associate](#) - EC2, VPC, S3, RDS, IAM, CloudWatch, CloudFormation Lambda, API Gateway.
- [Generative AI with Large Language Models](#) - Transformer Architecture, Model Fine-Tuning Hugging Face (FLAN-T5), Open AI, Prompt Engineering.

Experience

Senior Software Engineer

Jan 2025 to Present
Virginia, USA

Quest Diagnostics

- Built and maintained lab instrument interfaces in Java, parsing incoming messages, interpreting data, and storing results in SQL Server.
- Developed 20+ decoupled modules deployed on WildFly, handling asynchronous communication between lab instruments and backend microservices across multiple environments.
- Designed robust message parsing and data interpretation logic to support various instrument protocols, ensuring seamless two-way integration and data integrity.
- Configured deployments on WildFly Server for UAT, PROD, and TEST, managing environment-specific configurations and JNDI resources.
- Implemented secure, efficient data flow using JDBC, optimizing SQL queries and stored procedures for real-time lab results processing.
- Collaborated with SMEs, reviewed instrument vendor specs, and mapped data formats (ASTM/HL7) to internal structures for accurate system behavior.
- Troubleshoot live issues via server logs, performed root cause analysis, and ensured proper communication between instruments and SQL-backed application services.
- Developing AI-powered automation to interpret lab data and generate reports, reducing manual work and improving speed in diagnostics processes.

Software Development Engineer II

Jan 2023 to Dec 2024
Minnesota, USA

Optum – UHG

- Led end-to-end development of a cloud-native SaaS platform processing 10,000+ transactions daily with <500ms latency and 99.9% uptime.
- Architected 4 microservices (Spring Boot) on AWS EKS, integrating third-party APIs and automating workflows from ingestion to compliance-ready response generation.
- Designed event-driven architecture with Kubernetes, Docker, and AWS services, improving scalability by 35% for high-traffic workloads.
- Developed AI-based claim prioritization using TensorFlow, reducing urgent claim turnaround by 40% and improving model accuracy to 92%.
- Automated deployments using Jenkins, Docker, Kubernetes with ECR scans and rolling updates, cutting deployment time by 40% across multiple environments.
- Built React portal with AWS Cognito for JWT authentication and embedded Grafana dashboards, enabling real-time visibility into SLAs, transactions, and system health.
- Implemented IAM, KMS encryption, and VPC isolation to secure 50+ microservices, ensuring HIPAA compliance across 15+ AWS cloud environments.
- Built observability framework by aggregating metrics from Prometheus, AWS CloudWatch, and X-Ray into Grafana, reducing incident resolution time by 30% via automated alerts for performance bottlenecks.
- Built real-time observability dashboards using OpenTelemetry, Prometheus, and Grafana to monitor microservices and proactively detect performance bottlenecks.

Software Development Engineer

May 2019 - Aug 2021
Jodhpur, India

HDFC Bank Limited

- Collaborated with stakeholders and cross-functional teams to translate business requirements into technical specifications, successfully onboarding user assets using scalable Java-based solutions.
- Designed and deployed RESTful APIs using Java, Spring Boot, and MongoDB, streamlining microservices deployment with Azure DevOps pipelines and resource groups, resulting in improved agility and frequent application updates.
- Implemented role-based access control (RBAC) using Spring Security, HTTP Basic authentication, and JWT tokens to secure API sessions and ensure compliance with data protection standards.
- Developed CI/CD pipelines leveraging Jenkins and Terraform, automating deployments, resolving merge conflicts, and integrating Prometheus for real-time monitoring, Grafana for visualization, and automated rollback procedures to maintain high availability.
- Diagnosed and debugged software issues effectively, reducing critical system defects by 15% through root cause analysis and efficient problem-solving techniques.
- Resolved front-end bugs using JavaScript frameworks (Angular), leveraging Chrome DevTools to debug and optimize UI performance.
- Enhanced process automation by integrating Python scripts with machine learning models, improving workflow management and efficiency.
- Implemented database sharding strategies, improving scalability, load distribution, and reducing response times in high-traffic environments.

Associate Software Engineer

Feb 2018 to Apr 2019
Hyderabad, India

Paytm

- Conducted comprehensive testing and debugging of software applications, reducing critical defects by 20% and improving reliability of transaction processing systems.
- Designed and implemented Java-based applications utilizing Spring Boot, MySQL, Kubernetes, Docker, and Gradle deployed and managed containerized applications via Kubernetes and Docker, ensuring seamless scalability and efficient deployments.
- Diagnosed and resolved software bugs, enhancing overall system stability and minimizing downtime in production environments.
- Collaborated in Agile development environments, actively contributing to sprint planning, backlog grooming, and retrospective meetings to drive timely project delivery and continuous improvement.
- Engineered optimized data pipelines to handle and process large datasets, achieving a 30% reduction in data processing times.
- Utilized Java and big data technologies to design and build high-performance pipelines capable of managing data volumes effectively.

Skills

- **Languages:** Java (JDK, JVM), Python, C, C#, Rust, SQL, Shell Script
- **Databases:** PostgreSQL, MongoDB, Oracle, SQL Server, Redis, Cassandra, BigQuery, NoSQL, DB2, MySQL, DynamoDB
- **DevOps & CI/CD:** AWS, Azure, GCP, Docker, Kubernetes, Jenkins, Terraform, GitHub/GitLab, ArgoCD, Vault
- **Web Technologies:** HTML5, CSS, JavaScript, AJAX, JSON, Bootstrap, jQuery, XML, Angular, React.js
- **Architecture & Integration:** Spring Boot, .NET, Node.js, Express.js, gRPC, REST APIs, Microservices, Event-Driven Architecture, Kafka, Pub/Sub, API Gateway
- **Web Service:** RESTful APIs, SOAP, JAX-RS, JAX-WS, Apache CXF, Axis, Jersey.
- **Application/Web Servers:** Apache Tomcat, Oracle Web Logic, IBM Web Sphere, JBoss
- **Testing Tools:** JUnit, TestNG, Mockito, Selenium, Protractor, Jasmine, Karma, Mocha, Chai, Spock
- **Build Tools:** Maven, Gradle, Webpack, Gulp, NPM
- **Operating Systems:** Windows, Linux, Unix, macOS
- **Project Management:** Jira, Rally, Microsoft Project
- **AI/ML & GenAI:** TensorFlow, PyTorch, Scikit-learn, Hugging Face Transformers, LangChain, OpenAI API, Prompt Engineering, LLM Fine-tuning, Vector Databases (Pinecone, FAISS, Weaviate), LangSmith, RAG pipelines

Education

Master of Science: Computer Science

University of Missouri, GPA: 3.5/4.0

2022
Kansas City, MO, USA

Bachelor of Technology: Electrical and Electronics Engineering

Aditya Engineering College, GPA: 3.0/4.0

2019
India