

Soumya Vaidya

Backend Software Engineer

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SUMMARY

Software Engineer with 5 years of experience specializing in backend development, microservices, and cloud-native applications. Skilled in building scalable APIs with Java, Spring Boot, Python, and AWS. Experienced in distributed systems, CI/CD pipelines, and container orchestration. Committed to delivering production-ready code within Agile teams. Recent Master's graduate in Computer and Information Science.

TECHNICAL SKILLS

Programming Languages	: Java, Python, RESTful APIs, HTML, CSS, JavaScript
Frameworks	: Spring, Spring Boot, Hibernate, Spring JPA, JDBC, Flask, RESTful API
DevOps	: Terraform, Serverless, Docker, Kubernetes, CI/CD, Jenkins, Spinnaker
Databases	: PostgreSQL, Oracle, DynamoDB, Cassandra, Redis Cache, Snowflake
Message/Monitoring	: Kafka, MQTT, Grafana, Prometheus
Cloud	: AWS (EC2, ECS, S3, Lambda, CloudFormation, DynamoDB, AWS RDS, SNS, SQS)
Software Quality Testing	: JUnit, Pytest, Swagger, Postman, Jmeter
IDEs & Project Management	: IntelliJ IDEA, Eclipse, VS Code, GIT, Bitbucket, Jira, Confluence

WORK EXPERIENCE

DTE Energy Jan 2025 – Current

Software Engineer

- Automated Java-based pipelines to ingest, process, and validate real-time operational data with high reliability.
- Enhanced data processing efficiency by optimizing SQL queries and implementing indexing, tightly integrating with Java services.
- Optimized SQL queries and added indexes to enhance data processing performance and reduce query time.
- Used Power BI to build data dashboards and perform trend analysis, enhancing decision-making capabilities.
- Engaged with stakeholders across teams to refine data validation and streamline reporting.

T-Mobile

May 2024 – Jan 2025

Software Engineer

- Engineered Java-based microservices using Spring Boot, JDBC to integrate system across Oracle DB, Salesforce, and Informatica MDM data sources, increasing master data accuracy and reducing sync latency.
- Established Rest APIs adhering to OpenAPI/Swagger specs, implementing versioning and HTTP semantics.
- Leveraged Spring JPA with Hibernate for efficient ORM-based data access.
- Wrote unit and integration tests using JUnit 5, Mockito, increasing test coverage.
- Built CI/CD pipelines using GitHub Actions for automated deployment to streamline release processes and increasing deployment speed
- Worked with Informatica MDM to implement ETL processes and used Snowflake to analyse large-scale datasets for improved data quality and reporting accuracy.
- Led coordination efforts with cross-functional team in Agile sprints to deliver backend features with master data requirements.

HPE Aruba Networking

Sept 2019-Nov 2022

Cloud Developer II

- Designed and Implemented Java microservices using Spring Boot, MVC Pattern and REST APIs to manage IoT devices and support frontend UI integration.
- Automated real-time data ingestion pipeline to process IoT data Stream with Java microservices, leveraging Kafka, MQTT, Redis Cache and java concurrency for efficient parallel processing.
- Integrated PostgreSQL and Cassandra via Spring JPA to support transactional and time-series data.
- Automated CI/CD workflows and containerized deployments with Docker/Kubernetes, reducing release time by 40%.
- Designed Python-based microservices to monitor IoT device telemetry data and integrated custom metrics with Prometheus, creating real-time monitoring dashboards in Grafana to enhance system visibility and reliability.
- Modernized codebase using Java 11+ features and applied design patterns such as Singleton and Factory to improve maintainability.

- Delivered AWS Lambda functions using Python with DynamoDB for data storage and built containerized services on ECS Fargate using S3, SNS, and SQS.
- Integrated monitoring with SNS and SQS to send email alerts on service failures, and deployed all services using Serverless Framework and Terraform.
- Participated in on-call rotations, improving response time and troubleshooting efficiency for production systems.

Netcracker Technology

June 2017- Aug 2019

Software Engineer

- Developed robust RESTful APIs using Java Spring Boot, Hibernate ORM for Geneva RBM and CRM
- Implemented Kafka-based event-driven integrations for real-time billing data processing and asynchronous communication across microservices
- Optimized Oracle database performance by designing complex SQL queries and stored procedures, enhancing transaction throughput and reducing latency
- Implemented test-driven development (TDD) practices using JUnit.
- Worked closely with QA and product teams to ensure timely issue resolution and smooth production deployments.
- Participated in sprint ceremonies including demos, retrospectives and planning meetings to improve delivery cadence

RESEARCH EXPERIENCE

Enhancing Memory Leak Detection Tools with Large Language Models (LLMs)

- Mined 40,000 GitHub repositories using Python automation to identify projects with memory leak issues, creating a large dataset for research and model training.
- Designed and Engineered Python automation leveraging Large Language Models (LLMs) to enhance memory leak detection by providing contextual insights, actionable code recommendations, and automated memory profile analysis.

Locating Inefficient Libraries in Serverless Code to Optimize Cold Start Time

- Researched AWS Lambda functions to identify inefficient libraries affecting cold start performance using lazy loading techniques.
- Generated data visualization graphs using Matplotlib to analyse and present research findings effectively.

EDUCATION

Master of Science, Computer and Information Science

Aug 2023-April 2025

University of Michigan-Dearborn

GPA: 4.0/4.0

Bachelor of Engineering, Computer Science and Engineering

Aug 2013-May 2017

Siddaganga Institute of Technology

GPA: 3.8/4.0

LEADERSHIP & ACHIEVEMENTS

- Aruba Recognition Award: Acknowledged for outstanding contributions and performance
- HPE FY21 Life Inside Recognition: Recognized for exceptional engagement with cross-functional teams