

# Vamsi Krishna Bodaballa

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## SUMMARY

- Computer Science graduate with 4+years of experience in building backend services, RESTful APIs, and full-stack web applications using Java, Spring Boot, and Angular/React. Worked on cloud platforms like AWS and GCP, focusing on microservices, automation, and scalable system design.
- Experienced in writing clean, testable, and maintainable code using object-oriented principles. Skilled in building CI/CD pipelines, working with Docker, Kubernetes, and Kafka, and writing automation scripts for testing and deployment.
- Comfortable working in Agile teams, solving real-world problems, and delivering high-quality code. Enjoys creating new features, debugging issues, and contributing to fast-paced projects that impact users at scale.
- Contribute to personal and open-source projects on GitHub while continuously learning through technical courses and certifications to strengthen skills in cloud computing, automation, and software engineering.

## EDUCATION

University of Kansas, Lawrence, KS, USA

Aug 2023 – May 2025

Master of Science: Computer Science

CGPA: 3.89/4.00

Courses: Data Structures and Algorithms, Machine Learning, Deep Learning, Computer Vision.

## PROFESSIONAL EXPERIENCE

Java Full Stack Developer – Zangle Technologies, Cumming, USA

June 2024 – Jul 2025

- Designed and deployed scalable, highly available architectures on **AWS**, resulting in a **25%** improvement in system reliability.
- Built and deployed microservices using **Java**, **Python**, **Spring Boot**, and **Spring Security**, enabling scalable apps within cloud.
- Designed **RESTful APIs** and integrated them into Angular apps, and improving frontend responsiveness.
- Developed dynamic, reusable UI components using **Angular 9**, **HTML**, **CSS**, and **TypeScript** to support internal platform tools.
- Automated **infrastructure provisioning** with Terraform and AWS CloudFormation, reducing manual setup time by 20%.
- Automated Kubernetes (**EKS**) cluster deployments, upgrades, and workload management using Terraform and Ansible.
- Implemented **Kafka**-based event pipelines for asynchronous messaging, reducing coupling and improving system resiliency.
- Modeled NoSQL data and used **Redis** for caching strategies, lowering read latency and enhancing query performance.
- Optimized SQL queries for **MySQL** to support real-time transactions and data consistency across distributed modules.
- Containerized backend services using **Docker** and deployed them on **Kubernetes**, achieving consistent, scalable environments.
- Created scheduled job workflows using **Spring Batch** and **Quartz**, automating daily tasks and long-running processes.
- Modularized logging and error handling with **Spring AOP**, improving observability while keeping codebase clean.
- Wrote unit tests in **JUnit** and **Mockito** for service-layer logic, increasing code coverage and preventing regressions.
- Built integration **test** cases to validate system workflows, collaborating with **QA** to ensure test completeness.
- Automated **UI tests** using **Jasmine** and **Protractor**, covering major user paths and improving UI test reliability.
- Streamlined deployments by implementing **CI/CD pipelines** with Code Pipeline and Jenkins, cutting deployment time by 30%.
- Managed Linux-based environments (Ubuntu and Amazon Linux) for AWS system optimization, troubleshooting, configuration.
- Ensured **24x7 cloud support** by actively monitoring and resolving performance issues with Prometheus and AWS CloudWatch.
- Developed monitoring and alerting solutions with **Splunk**, achieving a **40% reduction** in Mean Time to Recovery (MTTR).
- Conducted peer code reviews and shared reusable patterns during team syncs to deliver stable features under tight timelines.

Software Developer – Walmart, Chennai, India

Jul 2021 – Jul 2023

- Automated tasks in a **Linux**-based environment (**RHEL**, **Ubuntu**) using Python and Bash by **reducing manual setup time by 20%**.
- Collaborated with cross-functional teams to design and support Walmart's item ingestion pipeline for supplier product data.
- Developed backend microservices using **Python**, **Java** to process large-scale supplier data with integrated logging and monitoring.
- Built interactive internal dashboards using **Angular** and **TypeScript** to visualize feed metrics, failures, and real-time processing status.
- Used **Kafka** for stream processing and integrated it with **AWS SNS/SQS** for asynchronous communication and notification flows.
- Performed **REST API** testing using **Postman**, validating response codes, payload structures, and schema compatibility across services.
- Wrote SQL and **PL/SQL** queries in **PostgreSQL** and **Oracle** to verify data pipelines and troubleshoot complex ingestion errors.
- Utilized **AWS Lambda**, **CloudWatch**, and **IAM** to automate error handling, monitoring, and secure access control across services.
- Used ServiceNow (**SNOW**) to log, prioritize, and manage incidents, ensuring SLAs were met and issue trends were documented.
- Integrated **F5 GTM/LTM** for high availability and global traffic distribution across production and staging environments.
- Maintained Jenkins-based **CI/CD pipelines**, containerized with **Docker**, and deployed them via **Amazon EKS** and **Elastic Beanstalk**.
- Built test suites with **JUnit** and **Mockito** to validate service logic and integrated them into Jenkins pipelines for automated execution.
- Maintained **QA** documentation in **Confluence** and used **Jira** for managing sprints, user stories, and defect resolution tracking.
- Configured environment health monitoring using **Grafana** and **Kibana**, and setup **Slack alerts** for proactive incident notifications.
- Applied **OOP** principles to develop scalable, reusable modules and collaborated on peer code reviews and knowledge sharing.
- Contributed to exploratory, regression, and smoke testing during sprint cycles and production rollouts.
- Mentored L1 QA members and guided test strategy design and conducted root cause analysis for flaky tests with SRE teams.

Software Developer – Dovekie Technologies, Hyderabad, India

Jun 2020 – Jun 2021

- Worked on web application development using **Java 8**, Spring Boot, and **Thymeleaf**, deploying apps on **Apache Tomcat** servers.
- Built interactive front-end interfaces using Angular 9 and **Bootstrap**, ensuring responsiveness and cross-browser compatibility.

- Developed backend RESTful APIs and business logic for pharmaceutical systems, improving system throughput by 20%.
- Used **Hibernate ORM** for database access and optimized SQL queries in **PostgreSQL** to reduce execution time and created batch jobs using Spring Batch and automated job scheduling for data processing using **Quartz Scheduler**.
- Utilized Docker for containerizing applications, achieving consistency across dev, test, and production environments.
- Developed and deployed microservices on Google Kubernetes Engine (**GKE**), enabling horizontal scaling and load balancing.
- Wrote **Python** and **Bash** scripts on **Linux** for automating deployment tasks and service monitoring across staging environments.
- Validated API functionality and data transformations using **Postman**, **JUnit**, and **TestNG** for robust backend testing.
- Managed builds using **Maven** and **Jenkins**, streamlining CI/CD workflows and improving deployment efficiency.
- Participated in test case design and helped QA validate regression, smoke, and exploratory test scenarios.
- Used Git for version control and collaborated through GitHub pull requests and code reviews.
- Assisted in tuning application and DB performance by monitoring logs, analyzing metrics, and applying fixes.

## SKILLS

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<b>Programming Languages:</b>	Java, Python, TypeScript, Golang, Shell Scripting, C++, YAML, C#,
<b>Cloud Platforms:</b>	Amazon Web Services, Google Cloud Platform, Microsoft Azure
<b>Database &amp; Frameworks:</b>	MySQL, PostgreSQL, NoSQL, DynamoDB, Django, Spring Boot, Node.js, React.js, ASP.NET
<b>AI/Ops &amp; LLM:</b>	Gen AI, Vertex AI, Amazon Bedrock, SageMaker, GenAI APIs, Ollama, Docker Runner.
<b>Infrastructure Management:</b>	Terraform, Ansible, CloudFormation, GCP Deployment Manager
<b>Containerization:</b>	Docker, Kubernetes, OpenShift, Helm, Istio
<b>DevOps and CI CD:</b>	Ansible, Jenkins, ArgoCD, CodePipeline, Maven, Gradle, Terraform, Docker, Kubernetes, Helm
<b>Monitoring:</b>	Prometheus, Grafana, ELK Stack, Datadog, AWS Cloud Watch, Splunk
<b>QA &amp; Testing:</b>	JUnit, Mockito, Postman, SoapUI, JMeter, Jasmine, Protractor
<b>Networking &amp; Security:</b>	VPC, VPN, Firewalls, Route 53, DNS, TCP/IP, OSI Layers, AWS GuardDuty, SAST, DAST
<b>Web Services:</b>	REST, SOAP, WSDL, JAX-RS, JAX-WS, JAXB, Swagger/OpenAPI
<b>Operating Systems:</b>	Unix/Linux (Ubuntu, Centos, Amazon Linux, RHEL), Windows.
<b>Messaging &amp; Streaming:</b>	Kafka, RabbitMQ, JMS, AWS SNS/SQS, ActiveMQ
<b>Project &amp; Collaboration Tools:</b>	Jira, Confluence, ServiceNow, Rally, Git, GitHub, WinSCP, PuTTY
<b>Servers &amp; IDE's:</b>	Apache Tomcat, WebLogic, WebSphere, JBoss, IntelliJ, Eclipse, STS, VSCode, NetBeans
<b>Other Skills/Tools:</b>	Git, GitHub, ServiceNow, Agile and Scrum Methodologies (Jira, Confluence).

## CERTIFICATIONS

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- **AWS Certified Developer – Associate**
  - **Google Cloud Certified – Associate Cloud Engineer**

## PROJECTS

### Web Application with AWS Deployment | AWS, Tomcat, RabbitMQ, MySQL, Memcached, Route 53 |

- Designed and deployed a cloud-based web application with secure user sign-in and a dashboard to display backend service status.
- Configured GoDaddy DNS with AWS Route 53 to route HTTPS traffic to an Application Load Balancer secured by security groups.
- Deployed auto-scaling Tomcat instances behind the ALB to handle dynamic user load and ensure high availability.
- Integrated RabbitMQ for message queuing, Memcached for caching, and MySQL for persistent storage, each within private subnets secured via AWS security groups.
- Automated provisioning using Vagrant and shell scripts for consistent multi-service deployment across environments.

**Source Code:** <https://github.com/Vamsi-767/Scalable-Web-Application-with-AWS-Deployment>

### Full-Stack E-Commerce Web Application | React.js, Spring Boot, MySQL, Java |

- Developed a fully functional e-commerce website using React.js for the frontend and Spring Boot for the backend.
- Implemented a user signup system, storing user information in a relational database for future interactions.
- Designed a product listing and cart system, allowing users to browse products, add items to the cart, and proceed to checkout.
- Created a RESTful API using Spring Boot to handle user registration, product management, and order processing.
- Used MySQL to store user details, cart items, and orders, ensuring data persistence and retrieval.
- Designed and implemented REST APIs for handling asset management, data validation, and processing automation.

**Source Code:** <https://github.com/Vamsi-767/Ecommerce-site>

### Automated API Testing Framework | Python, Pytest, Postman, Jenkins, Splunk|

- Designed and developed a backend API testing framework as a personal project to enhance automation and validation skills.
- Created detailed test plans to validate functionality, error handling, and performance of RESTful APIs.
- Automated test scripts using Python and Pytest, achieving faster and repeatable validation cycles.
- Integrated test execution into Jenkins CI pipelines, enabling continuous feedback on system health.
- Conducted manual exploratory testing using Postman to detect edge case failures early in the development cycle.

**Source Code:** [Automated API Testing Framework \(GitHub\)](#)

### Generative AI Assistant – GCP | Python, Vertex AI, Cloud Run, GitHub Actions|

- Built a Python-based web application that integrates with Google Vertex AI to generate user-specific content using LLMs.
- Deployed the service on Cloud Run with automated CI/CD pipelines via GitHub Actions for seamless delivery.
- Designed secure API access and implemented request logging for traceability and audit compliance.
- The system achieved 99.9% uptime, handled 100+ daily inference requests, and enabled scalable, cost-effective AI deployment.