

Madhava Reddy Muli Software Engineer

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PROFESSIONAL SUMMARY

Accomplished **Software Engineer** with 5 years of experience architecting and delivering scalable, high-performance applications across **FinTech, E-Commerce, and Cloud ecosystems**. Expert in **microservices design, distributed systems, and DevOps automation**, with a proven record of enhancing system efficiency, reliability, and security. Adept at leveraging **AWS, Kubernetes, and CI/CD pipelines** to streamline deployments, optimize runtime performance, and ensure continuous delivery at scale. Strong collaborator with cross-functional teams, integrating modern **AI-driven automation, observability, and performance tuning** to deliver resilient, data-driven, and business-aligned software solutions.

TECHNICAL SKILLS

Programming & Frameworks: Java, Python, JavaScript, TypeScript, Spring Boot, Flask, Node.js, React.js, RESTful APIs
Cloud Platforms: AWS (EC2, Lambda, CloudWatch, API Gateway, ECS, S3), Azure, Kubernetes, Docker, Terraform
Data & Observability Tools: Kafka, Nexus, Grafana, Prometheus, Amazon RDS, DynamoDB, MySQL, PostgreSQL, GraphQL
DevOps & CI/CD: Jenkins, Git, GitHub Actions, Maven, Gradle, CI/CD Automation, Brazil Package Handling Tools (Shipment Routing, Label Services, Package Tracking APIs, and Fulfillment Center Integration), Containerization, Monitoring & Logging
Machine Learning & Automation: Scikit-learn, Pandas, NumPy, MLflow, AI-driven Automation, Event-Driven Architecture
System Design & Architecture: Microservices Architecture, Event-Driven Systems, API Optimization, Performance Tuning
Security & Compliance: OAuth 2.0, SAML, JWT, PCI DSS, GDPR Compliance, Identity & Access Management
Testing & Quality Assurance: Selenium, Jest, JUnit, PyTest, Integration Testing, Regression & Load Testing

PROFESSIONAL EXPERIENCE

Software Development Engineer | Amazon | USA

Aug 2025 – Present

- Owned widget-level engagement instrumentation for **Brand Stores**, partnering with Analytics and Advertiser Experience teams to define KPIs, track interactions, and enhance user engagement visibility.
- Expanded **Client-Side Analytics (CSA)** instrumentation from navigation to widget-level tracking using **Intersection Observer** APIs, improving event accuracy and reducing overhead by **25%**.
- Implemented **event batching, sampling, and schema versioning** to optimize telemetry throughput while maintaining **Nexus compliance** and minimizing payload latency.
- Enhanced observability through **CloudWatch** and **Grafana dashboards**, ensuring 99.9% data delivery reliability and enabling proactive monitoring for performance bottlenecks.
- Leveraged AI-assistive tools such as **Amazon Q, Cline, Kiro, and Pippin** to accelerate development workflows, automate code reviews, and enhance debugging efficiency across microservice deployments.

Software Developer | PayPal | USA

Jan 2024 – Jul 2025

- Engineered and maintained **high-performance fintech platforms** processing over 10M+ daily transactions with **99.99% system uptime**, ensuring secure, uninterrupted global payment operations.
- Led the **migration from monolithic systems to cloud-native microservices** on AWS and Kubernetes, improving scalability for peak workloads and cutting annual operational costs by **\$100K**.
- Designed and deployed **AI-driven fraud detection models** using Python and ML algorithms, boosting fraudulent transaction detection accuracy by **35%** and reducing chargebacks significantly.
- Revamped **RESTful API architecture** with optimized request handling, caching, and asynchronous processing, decreasing latency by **50%** and enabling seamless integration across payment platforms.
- Implemented a **comprehensive automated testing framework** using Selenium and Jest, increasing test coverage from **45% to 92%** and improving release reliability while maintaining full **PCI DSS compliance**.

Software Engineer | CGI | India

Jun 2019 – Jul 2022

- Developed and optimized **scalable enterprise web applications** by refining backend logic, APIs, and database performance, achieving a **30% improvement in system efficiency** and faster client response times.
- Re-architected legacy monolithic systems into **microservices-based architectures**, improving fault isolation, enabling independent scaling, and **reducing system downtime by 40%** for high-traffic modules.
- Automated **data processing workflows** by integrating Python-based ML models, eliminating **60+ manual hours/month** and significantly improving data accuracy and operational reliability.
- Engineered **CI/CD pipelines** with Jenkins and Docker, accelerating deployment cycles from **6 hours to 45 minutes**, enhancing release quality, and minimizing production downtime.
- Strengthened **application security and compliance** by implementing OAuth 2.0 and SAML authentication, ensuring **95% adherence** to corporate security standards and mitigating unauthorized access risks.

EDUCATION

Master of Science in Computer and Information Sciences

Aug 2022 – May 2024

University of North Carolina, Wilmington

Bachelor of Technology in Computer Science and Engineering

Jul 2016 – Jun 2020

Ramaiah University of Applied Sciences, India

CERTIFICATIONS

Google Data Analytics [[Link](#)] || Google UI/UX [[Link](#)] || AWS Cloud Practitioner Essentials || Microsoft Technology Associate