

# Aravind Kumar

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## Summary

Java Backend Engineer (3+ years) specializing in Spring Boot, Spring Security, and microservices. CKAD (91%) & Oracle certified with proven experience reducing system processing times from minutes to seconds through architectural optimization.

## Relevant Experience

**Founding Engineer** | Part-time | Zentra, USA

**Oct 2025 – Present**

- Built beta signup system capturing 1,000+ user submissions with server-side validation, delivering analytics that directly supported seed funding efforts.
- Established development infrastructure from scratch configured CI/CD pipelines with GitLab, integrated CodeRabbit for automated code reviews, and containerized applications with Docker.

**Java Backend Developer** | Co-op | MetLife, USA

**Jan 2025 – Sept 2025**

- Reduced user wait times by 35% by engineering event-driven architecture with Spring Boot and RabbitMQ, decoupling monolithic services from synchronous external APIs into async background workers.
- Achieved 99.9% service availability during API outages by implementing Circuit Breaker patterns with Resilience4j, preventing cascading failures across 3+ dependent microservices.
- Owned notification microservice end-to-end from Spring Boot implementation to Kubernetes deployment on AWS EKS, creating Helm charts for reproducible deployments and configuring pod autoscaling.
- Modernized PHP customer portal by rebuilding the frontend in React and Tailwind CSS using mobile-first design, developing reusable Material-UI components with client-side validation.

**Software Engineer** | Intern | CERIAS, Purdue University, USA

**May 2024 – Aug 2024**

- Reduced page-load latency from 5 sec to 1 sec by optimizing MySQL indexes and consolidating redundant REST endpoints.
- Redesigned cybersecurity research portal with React and protected routing, achieving 90%+ test coverage with Jest.

**Software Engineer** | Full-time | LTIMindtree | Client: Citi Bank, India

**Aug 2021 – May 2023**

- Slashed document validation time from 30+ minutes to under 60 seconds by migrating legacy AbInitio pipeline to Spring Boot, implementing 35+ business rules with Java Streams and JPA.
- Improved data processing throughput by 50% by implementing multithreading with Java Executor Service.
- Achieved 80%+ code coverage with JUnit 5 and Mockito, reducing production defects by 30%.
- Reduced database migration planning from 2 days to 15 minutes by building RESTful APIs with OrientDB and delivering an interactive React dashboard for data lineage visualization.

## Certifications

- CKAD: Certified Kubernetes Application Developer | The Linux Foundation | *Score: 91%*
- Oracle Certified Java SE 11 Developer | Oracle

## Projects

**Resiligate** | Fault-Tolerant Microservices | Java, Spring Cloud, Resilience4j, Docker | [Source](#)

- Built 5+ microservice platform with Spring Cloud Gateway, Eureka, and OpenFeign, securing APIs with Spring Security (JWT + OAuth2) and implementing Circuit Breakers with Resilience4j for zero-downtime fault tolerance.

**Reactor** | Serverless CI/CD Pipeline | AWS Lambda, SQS, DynamoDB | [Source](#)

- Designed end-to-end CI/CD pipeline automating GitHub deployments through AWS CodeBuild, with SQS Dead-Letter Queues for 100% message reliability and DynamoDB Streams triggering real-time notifications via Lambda WebSockets.

## Education

**Purdue University**, West Lafayette, IN – *M.S. Computer Science*

**Jun 2023 – May 2025**

**Anna University**, Chennai, India – *B.E. Computer Science*

**Jun 2017 – May 2021**

## Technical Skills

**Backend:** Java, Spring Boot, Spring Security, Spring Cloud, JPA/Hibernate, Multithreading, REST APIs, RabbitMQ.

**Cloud & Data:** Kubernetes (CKAD), Docker, Helm, AWS (EKS, Lambda, SQS), PostgreSQL, MySQL, MongoDB, Redis.

**Frontend & Testing:** React, Next.js, Redux, Tailwind CSS, TypeScript, Jest, JUnit 5, Mockito, SonarQube.