Rahul Podugu

(202) 505-5246 • rahulpodugu99@gmail.com • linkedin.com/in/rahulpodugu • github.com/rahul2251999

PROFESSIONAL SUMMARY

- Full Stack Software Engineer with 3+ years of experience delivering scalable, fault-tolerant cloud-native applications. Specialized in Java (Expert), Spring Boot, and microservices architecture.

- Extensive hands-on experience with AWS services: Compute (EC2, Lambda), Storage (S3), Databases (DynamoDB, Aurora, ElastiCache), Networking (API Gateway, CloudFront), Messaging (SQS, SNS, Kafka), and Orchestration (EKS, ECS).

- Delivered resilient systems including a payment platform handling 2M+ daily transactions with 99.9% uptime (mitigated failures by 78%) and an inventory solution supporting 3x volume growth with 65% faster API responses.

- Enhanced performance by lowering API latency by 70% using Redis caching and query optimization; trimmed memory footprint by 35% through backend tuning.

- Led implementation of DevOps workflows: CI/CD (Jenkins, CodePipeline, GitLab CI), IaC (Terraform), Docker/Kubernetes deployment, and observability via Prometheus, Grafana, CloudWatch, and ELK.

- Fostered Agile/Scrum adoption, secure development (OWASP Top 10), and team mentorship—elevated team velocity by 30% through peer programming and review practices.

- Focused on delivering measurable impact through customer-facing solutions (+28% engagement) and continuous innovation in distributed and event-driven systems.

TECHNICAL SKILLS

- **Languages**: Java, Python, JavaScript, TypeScript, SQL, C, C++

- **Backend Frameworks**: Spring Boot, Spring Cloud, Hibernate/JPA, Maven, Gradle, JUnit, Mockito

- **Frontend Frameworks**: React, Node.js, HTML5, CSS3, Redux, Webpack, TypeScript

- **Cloud Platforms**: AWS (EC2, S3, Lambda, DynamoDB, EKS, ECS, API Gateway, CloudFront, IAM, SQS, SNS, CloudFormation)

- **Infrastructure & DevOps**: Docker, Kubernetes, Jenkins, AWS CodePipeline, GitLab CI, Argo CD, Terraform (IaC), Git

- **Databases & Caching**: MySQL, PostgreSQL, MongoDB, DynamoDB, Redis, Amazon ElastiCache, Cassandra, Aurora

- **Architecture Patterns**: Microservices, RESTful APIs, Event-Driven Architecture (Kafka, SQS/SNS, Kinesis), Distributed Systems, SOA, Domain-Driven Design (DDD), High-Availability Systems

- **Monitoring & Observability**: AWS CloudWatch, AWS X-Ray, Prometheus, Grafana, ELK Stack (Elasticsearch, Logstash, Kibana), OpenTelemetry

- **Development Practices**: Agile/Scrum, Test-Driven Development (TDD), Behavior-Driven Development (BDD), CI/CD, Pair Programming, Code Reviews, OWASP Top 10

PROFESSIONAL EXPERIENCE

- **Aztra Ai** — Software Engineer II
  Columbus, OH, USA — *Jan 2024 – Present*
  - Architected and implemented a fault-tolerant payment platform using Java, Spring Boot, and Kafka, processing 2M+ daily transactions; mitigated failures by 78% and boosted throughput by 45%.
  - Devised and deployed a microservices-based inventory system on AWS EKS with Docker and DynamoDB; accelerated API responses by 65% and scaled seamlessly to 3x traffic.
  - Elevated team productivity by 30% by mentoring 4 junior engineers, facilitating pair programming, and enforcing Git-based code review practices in Agile environments.
  - Established a comprehensive observability stack using Prometheus, Grafana, and AWS CloudWatch/X-Ray; reduced MTTR from 45 minutes to under 10.
  - Delivered user-facing components in React and TypeScript, increasing engagement by 28% and raising Net Promoter Score by 15 points.
  - Developed a high-throughput data pipeline with Java, AWS Lambda, Kinesis, and DynamoDB; supported 500GB+ daily data flow with 99.99% uptime.

- ○ Tuned complex queries and introduced Redis caching (ElastiCache); decreased API latency by 70% and cut DB load by 40%.
- ○ Spearheaded migration from a monolithic system to AWS-based microservices with Terraform IaC; improved deployment cycles by 50% and scalability across services.

- **UST**   Software Development Engineer
  Bangalore, India   *Jun 2020 – Jul 2022*
  - ○ Engineered backend services using Java, Spring Boot, and Hibernate for an e-commerce platform with 100K+ daily users; ensured high performance and reliability.
  - ○ Developed RESTful APIs with Spring Boot and integrated Stripe and PayPal payment gateways; boosted checkout success rate by 15%.
  - ○ Implemented an event-driven sync mechanism between services using AWS SQS/SNS; enhanced data consistency by 85%.
  - ○ Collaborated in a 6-member Agile team to ship features on time and improve sprint throughput through proactive monitoring and iterative delivery.
  - ○ Diagnosed and resolved memory inefficiencies in Java services; reduced memory usage by 35% and improved responsiveness.
  - ○ Authored unit/integration tests with JUnit and Mockito; attained over 90% test coverage and lowered production bug rates by 65%.
  - ○ Maintained CI/CD pipelines using Jenkins and AWS CodePipeline; accelerated deployment from hours to 15 minutes and enabled bi-weekly releases.

Projects

- **Distributed Cache System**   Java, Spring Boot, Redis, Consistent Hashing, AWS ElastiCache, CloudWatch
  github.com/Rahul2251999/Distributed-Cache-System
  - ○ Built a high-performance distributed cache using Redis and consistent hashing for node sharding and data replication; achieved 99.9% availability and sub-ms latency at 10K+ RPS.
  - ○ Implemented AWS CloudWatch alarms and metrics for proactive monitoring and failure detection.

- **Decentralized Secure File Sharing System**   Java, RSA/AES, Linux, Distributed Systems
  github.com/Rahul2251999/Peer-to-Peer-Secured-File-System
  - ○ Pioneered a decentralized file-sharing system with end-to-end encryption (RSA/AES) and a distributed hash table for file indexing.
  - ○ Achieved zero data breaches over 12 months and 3× faster file access using asynchronous I/O (io_uring) and multithreading.

- **Real-time Stock Trading Engine**   Java, Spring Boot, Multi-threading, Concurrency
  github.com/Rahul2251999/stock-trading-engine
  - ○ Developed a stock trading engine with a lock-free concurrency model and atomic operations.
  - ○ Enabled millisecond latency for trade matching across 1,000+ stock tickers without sync bottlenecks.

Education

- **University of Maryland Baltimore County**   Baltimore, MD, USA
  M.S. in Computer Science   *May 2024*
- **Amrita Vishwa Vidyapeetham**   Coimbatore, India
  B.Tech in Computer Science and Engineering   *May 2021*

Publications

- **Remote Medical Assistance for Marine Fishermen through OceanNet**. Presented at ICCCNT 2021, Kharagpur, India. doi:10.1109/ICCCNT51525.2021.9579678