

Aditya Sugandhi

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SUMMARY

Software Engineer with 5+ years building **large-scale release infrastructure** and **distributed systems** in **Java** and **Python**. Expert in **CI/CD pipelines**, **release workflows**, **build automation**, and **feature flag gating** with production experience shipping OS-level updates to **millions of devices**.

WORK EXPERIENCE

Software Engineer

Florida State University

Nov 2024 – Present

Tallahassee, FL

- **Designed and developed** enterprise-scale **infrastructure management platform** in **Java** and **TypeScript**; built **37 REST API endpoints** serving **35K+ networked devices** across **172+ networks** with **real-time WebSocket** telemetry streaming.
- **Led design reviews** with cross-functional stakeholders to evaluate **technology choices and system architecture**; architected **event-driven microservices** with **PostgreSQL**, **Redis** caching, and **S3** storage achieving **99.2% system accuracy**.
- **Built automated CI/CD pipelines** with **GitHub Actions** for **build, test, and release workflows**; implemented **feature flag gating**, automated security checks, and **release artifact generation** across multiple deployment environments.
- **Reviewed code** from 4 team members enforcing **style guidelines, testability, and efficiency**; maintained **360+ unit/integration tests** at **85%+ coverage** with **Grafana/CloudWatch** monitoring for **issue diagnosis and resolution**.

Software Engineer, Research

Florida State University

Jan 2023 – Aug 2024

Tallahassee, FL

- **Developed and maintained distributed data processing infrastructure** using **Java** and **Spark (Scala)** on **Kubernetes** clusters; processed **1TB+ datasets** with **+40% throughput improvement** through **algorithm optimization** and **efficient data structures**.
- **Designed parallel processing pipelines** with windowed aggregations and **compute-optimized scheduling**; reduced **pipeline runtime by 50%** through **data structure optimization** and **memory-efficient batch processing**.
- **Contributed to technical documentation** for system architecture and operational procedures; deployed **Prometheus/Grafana** monitoring with **automated alerting** for **performance issue triaging and resolution**.

Software Engineer

Aspire Systems

Oct 2020 – Jul 2022

Chennai, India

- **Led architecture design** for **monolith-to-microservices migration** on **AWS**; developed **Java-based event-driven services** processing **500K+ transactions/day** across **distributed infrastructure** with **99.5% availability** and **20% cost reduction**.
- **Designed and implemented build and deployment automation** using **Jenkins, Docker, and Kubernetes**; established **release workflows** with **security scanning**, **artifact versioning**, and **automated rollback** reducing **release time by 65%**.
- **Participated in design reviews** evaluating **distributed system patterns** and **infrastructure decisions**; authored **technical documentation** for microservices architecture, API contracts, and operational runbooks.
- **Triaged and debugged production issues** across **hardware, network, and service layers** using **Prometheus, Grafana, and CloudWatch**; reduced **MTTR by 60%** through **systematic root cause analysis** and **automated remediation**.
- **Mentored 5 developers** on **Java best practices, code review standards, and testing methodologies**; achieved **90% test coverage** with comprehensive **TDD/BDD** implementation.

PROJECTS

- **Release Build Orchestration System** — Designed and developed **automated release pipeline** using **Java** and **Python** for multi-branch **build artifact generation**. Implemented **release gating** with security checks, **feature flag guards**, and **signing key management** for secure artifact distribution. Tech: **Java, Python, Jenkins, Docker, Kubernetes, Terraform**.
- **Infrastructure Monitoring & Diagnostics Dashboard** — Built **React/TypeScript** frontend with **Node.js** backend for **real-time system health monitoring**. Implemented **13 API endpoints** with **OAuth2** authentication, **time-series metrics**, and configurable **alerting for build failures**. Tech: **TypeScript, React, Node.js, PostgreSQL, Redis**.
- **Distributed API Gateway with Rate Limiting** — Architected **scalable API gateway** with **rate limiting, circuit breakers, and distributed tracing** for large-scale service infrastructure. Handled **1000+ req/sec** with **sub-100ms latency**. Tech: **Java, Python, Kafka, Kubernetes, Terraform**.

TECHNICAL SKILLS

- **Languages:** Java, Python, TypeScript, JavaScript, SQL, Scala, C++ (familiar), Go (familiar), Bash/Shell
- **Build & Release:** CI/CD (Jenkins, GitHub Actions), Docker, Kubernetes, Terraform, Feature Flags, Release Gating, Build Automation
- **Infrastructure:** AWS (EKS, Lambda, S3, EC2), GCP (GKE, Cloud Build), Linux (Ubuntu/Debian), Systemd, Nginx
- **Data & Storage:** PostgreSQL, MySQL, Redis, DynamoDB, MongoDB, BigQuery, Apache Kafka, Apache Spark
- **Backend & APIs:** Spring Boot, Node.js, FastAPI, REST/gRPC, API Gateway, OAuth2/JWT, WebSocket, Protobuf
- **Practices:** Data Structures & Algorithms, System Design, Code Review, TDD/BDD, Agile/Scrum, On-Call/Incident Response, Documentation

EDUCATION

Florida State University
M.S. in Computer Science

Tallahassee, FL

- Relevant Coursework:** Data Structures & Algorithms, Distributed Systems, Advanced Database Systems, Computer Networks, Operating Systems

SRM Institute of Science & Technology
B.Tech. in Computer Science

Chennai, India

PUBLICATIONS & CERTIFICATIONS

- Review Classification & False Feedback Detection (IJAST) | AWS Solutions Architect (Udemy, 2024)