

Aditya Sugandhi

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SUMMARY

Software Engineer with 5+ years building **distributed systems** and **microservices** in **Python, Scala, Java, and Go**. Production experience with **Kafka, Spark, Kubernetes, PostgreSQL, and Redis** — owned end-to-end platforms processing **500k+ events/day** at **99.5% availability**. Proven track record improving **operational stability, code quality, and cross-functional delivery** with product and data teams.

TECHNICAL SKILLS

- Languages:** Python, Scala, Java, SQL, Bash, JavaScript/TypeScript, Go (ramping)
- Data & Streaming:** Apache Kafka (Connect, Streams, Schema Registry), Apache Spark (PySpark/Scala), BigQuery, Druid, PostgreSQL, Redis, DynamoDB, S3
- Backend & APIs:** FastAPI, gRPC, Thrift, REST/GraphQL, Baseplate, API Gateway, Microservices Architecture, OAuth2/JWT
- Infrastructure & DevOps:** Kubernetes, Docker, Argo, AWS (EKS, EMR, MSK, Fargate, Lambda), Terraform, CI/CD (Jenkins, GitHub Actions)
- Observability & Practices:** Prometheus, Grafana, CloudWatch, Distributed Tracing, TDD/BDD, 24/7 On-Call, Agile/Scrum

WORK EXPERIENCE

BAS Software Developer

Florida State University

Nov 2024 – Present
Tallahassee, FL

- Owned end-to-end design, development, deployment, and monitoring of distributed platform serving **35k+ devices** across **172+ networks**; built **37 REST/gRPC API endpoints** with **real-time WebSocket streaming, PostgreSQL persistence, and Redis caching** achieving **99.2% accuracy**.
- Designed **async event-driven microservices** with message queues for task processing; implemented **API Gateway** with rate limiting, **S3 file storage, and JWT-based RBAC auth** — directly analogous to **advertiser-facing API infrastructure**.
- Built **CI/CD pipelines** (GitHub Actions, Jenkins) with **Docker** containerization and **Kubernetes-ready architecture**; established **Grafana/CloudWatch dashboards** and alerting for **24/7 on-call operational stability**.
- Drove **code quality** with **360+ unit/integration tests** achieving **85%+ coverage** via **TDD/BDD**; partnered with cross-functional teams on feature prioritization, timeline management, and release execution.

Machine Learning Researcher

Prof. Olmo Zavala Romero — FSU

Jan 2023 – Aug 2024
Tallahassee, FL

- Built optimized **Spark (Scala/PySpark) distributed jobs** on **Kubernetes/EMR clusters** processing **1TB+ datasets**; implemented shuffle optimization, partitioning strategies, and **Parquet file layout tuning** achieving **+40% throughput and 99% job success rate**.
- Architected **parallel data processing pipelines** with windowed aggregations and **BigQuery-style analytics** for performance measurement; reduced **pipeline runtime by 50%** through **async batch optimization and compute resource tuning**.
- Deployed end-to-end **monitoring with Prometheus/Grafana**; implemented automated drift detection and SLA alerting across distributed infrastructure supporting **operational stability improvements**.

Software Analyst

Aspire Systems

Oct 2020 – Jul 2022
Chennai, India

- Led **monolith-to-microservices migration** on **AWS EKS**; owned architecture, implementation, and operations of **event-driven services in Java and Python**; improved availability to **99.5%** and reduced infrastructure costs by **20%**.
- Architected **real-time event streaming** using **Kafka (AWS MSK)** with consumer groups and **DynamoDB Streams**; processed **500k+ events/day** with dead-letter queues for fault-tolerant async delivery and **10x spike handling**.
- Built **operational dashboards** with **Prometheus, Grafana, and CloudWatch**; established **24/7 on-call** with PagerDuty, reducing **MTTR by 60%** through automated runbooks — directly applicable to **ads delivery reliability**.
- Deployed **auto-scaling Kubernetes clusters** with **Docker** and **Argo workflows**; implemented **Terraform IaC** across dev/staging/prod with **CI/CD pipelines** for rapid, safe deployments.
- Mentored **5 developers** on **Agile/Scrum practices and microservices patterns**; achieved **90% unit test coverage** with **TDD/BDD** across all services.

PROJECTS

- Self-Hosted Cloud Server (server-east)** — Provisioned **Linux home server** with **Docker**-containerized services (Plex, qBittorrent), **SSH** via ed25519 keys and **ngrok tunneling** for remote access, and **fail2ban** for security. Hosts multiple production apps including Go microservices, Next.js frontends, and Python backends. Tech: **Linux, Docker, SSH, ngrok, fail2ban, systemd**.
- Go Authentication Microservice** — Built **HTTP server in Go** with JSON-based login endpoints, request routing, and method validation. Deployed on **server-east** with health checks and structured error responses. Tech: **Go, net/http, JSON**.
- Worker-AI** — Built **distributed multi-agent task orchestration platform** with **FastAPI** backend, **PostgreSQL (SQLAlchemy 2.0)**, **Redis caching**, and **Firebase Auth**. Designed **async API layer** with **React Query-powered Next.js 14** frontend. Containerized with **Docker Compose**. Tech: **Python, FastAPI, PostgreSQL, Redis, Next.js, Docker**.
- BookedFlow** — Architected **full-stack CRM/booking platform** with **Next.js 14, Supabase, and OpenAI agents integration**. Built team

collaboration, form workflows, and **real-time data sync**. Deployed on self-hosted infrastructure. Tech: **TypeScript, Next.js, Supabase, Tailwind CSS**.

EDUCATION

Florida State University M.S. in Computer Science	Aug 2022 – May 2024 Tallahassee, FL
SRM Institute of Science & Technology B.Tech. in Computer Science	Aug 2016 – May 2020 Chennai, India

PUBLICATIONS & AWARDS

- Review Classification & False Feedback Detection (IJAST)
- 2nd Place, SRM University Hackathon (2019)
- AWS Solutions Architect Course (Udemy, 2024)