

Aditya Sugandhi

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SUMMARY

Software Engineer with 5+ years building **AI-driven software systems** in **Go, Python, and JavaScript/TypeScript** on **Linux/Windows**. Expert in **Docker, SQL, AWS, and deep learning** with rigorous **code review, bug fixing, and Agile/TDD** discipline in **regulated environments**.

WORK EXPERIENCE

BAS Software Developer
Florida State University

Nov 2024 – Present
Tallahassee, FL

- Developed and released **AI-based building automation software** using **Go, JavaScript/TypeScript, and Python** on **Linux/Windows**; built **REST APIs** with **SQL** databases and **Docker** containers serving **795+ IoT sensors and lab automation devices** across **162 networks** in a **regulated environment** with **design control** and **compliance documentation**.
- Implemented rigorous **code review** workflow with **GitHub** pull requests, branch protection rules, and **source control** best practices; maintained **360+ unit tests** and **integration tests** with systematic **bug fixing** and **regression testing**, achieving **85%+ code coverage** using **TDD/BDD** methodology.
- Built **CI/CD pipelines** with **GitHub Actions** and **Jenkins** for automated **build, test, and release** cycles on **Linux**; containerized services using **Docker** with **AWS** deployment, reducing release time by **40%** while enforcing quality gates.
- Designed **real-time telemetry ingestion system** with **WebSocket** and **REST API** endpoints, **PostgreSQL** for persistent storage, and **Redis** caching; integrated **CloudWatch** and **Grafana** monitoring for **24/7 system reliability**.
- Collaborated with cross-functional teams including **hardware engineers, facility managers, and product stakeholders** to define **software requirements** and deliver features in **Agile sprints** with bi-weekly releases and retrospectives.

Machine Learning Researcher
Prof. Olmo Zavala Romero — FSU

Jan 2023 – Aug 2024
Tallahassee, FL

- Architected **deep learning** and **AI/ML pipelines** using **Python, Docker, and AWS** (Lambda, S3, EC2) on **Linux**; processed **1TB+ oceanographic datasets** with **TensorFlow** and **scikit-learn** models, implementing **RAG** with vector embeddings for semantic search.
- Built **data processing services** with **SQL** (PostgreSQL) and **Python scripting**; optimized **Spark/PySpark** jobs on **Kubernetes** clusters achieving **+40% throughput** and **99% job success rate** through batch scheduling and partitioning.
- Implemented **automated testing** and **model validation frameworks** with **pytest** and **CI/CD**; reduced **ML pipeline runtime** by **50%** and **infrastructure costs** by **30%** while maintaining model accuracy above target thresholds.

Software Analyst
Aspire Systems

Oct 2020 – Jul 2022
Chennai, India

- Led **monolith-to-microservices migration** using **Java and JavaScript/TypeScript** on **Linux/Docker**; deployed to **AWS EKS (Kubernetes)** with **Terraform IaC**; improved system availability to **99.5%** and reduced infrastructure costs by **20%**.
- Built **real-time event streaming** using **AWS MSK (Kafka)** and **SQL** databases, processing **500k+ events/day** with **SQS** dead-letter queues for fault-tolerant message delivery; maintained **100% data integrity** across distributed services.
- Developed **customer-facing chatbot backend** using **Java and Python** with **conversation flows** and **decision tree logic**, processing **10k+ daily interactions** with **95% automated resolution rate**, supporting product and AI development teams.
- Deployed **auto-scaling Kubernetes clusters** with **Docker** containers on **Linux**; configured autoscaling for **10x traffic spikes**; established **monitoring** with **Prometheus, Grafana, and CloudWatch** for production **troubleshooting**.
- Enforced **code review** discipline with **GitHub/Bitbucket** pull requests and **CI/CD pipelines** (Jenkins); achieved **90% unit test coverage** with **TDD/BDD**; mentored **5 developers** on **Agile/Scrum** and **source control** best practices.

PROJECTS

- AI-Powered Digital Asset Scanner (Go/Docker)** [GitHub](#) — Built **Go** microservice for **AI-based image analysis** with **REST API, Docker** containerization, and **PostgreSQL** storage on **Linux/AWS**. Implemented **concurrent processing** with goroutines/channels, **unit tests** with Go testing framework, and **CI/CD** with GitHub Actions. Processes **1000+ assets/hour**.
- Multi-Agent AI Platform (Python/LangChain)** [GitHub](#) — Architected **multi-agent AI system** with **LangChain/LangGraph** orchestrating **5+ provider integrations**. Implemented **RAG pipeline** with vector embeddings, **20+ REST API endpoints**, **Docker** deployment. Tech: **Python, FastAPI, SQL, AWS, HTML/CSS**.
- Real-Time Data Pipeline (TypeScript/AWS)** [GitHub](#) — Built **event-driven ETL** using **TypeScript, AWS Lambda, S3, SQS, Docker**. Implemented **Terraform IaC, Kubernetes** deployment, **SQL** data warehouse, and **CloudWatch** monitoring on **Linux**. Processes **1000+ documents/day**.

TECHNICAL SKILLS

- Languages:** Go, Python, JavaScript/TypeScript, Java, SQL, Bash, PowerShell, HTML/CSS, R
- Cloud & Infrastructure:** AWS (EC2, Lambda, S3, SQS/SNS, RDS, EKS, ECR, CloudWatch), Azure, Linux (Ubuntu/CentOS), Windows, Networking
- Containers & DevOps:** Docker, Kubernetes, Terraform, Jenkins, GitHub Actions, CI/CD Pipelines, Bitbucket, SVN, Perforce

- **AI/ML & Data:** Deep Learning, TensorFlow, PyTorch, LangChain, RAG Pipelines, Scikit-learn, OpenCV, NumPy, Pandas, Vector Embeddings
- **Backend & APIs:** Go (net/http, Gin), FastAPI, Express.js, Spring Boot, gRPC, PostgreSQL, MongoDB, Redis, REST APIs, GraphQL
- **Testing & Quality:** TDD, BDD, Unit Testing (Go testing, pytest, Jest), Integration Testing, System Testing, Bug Fixing, Code Review, Cybersecurity Best Practices, Agile/Scrum

EDUCATION

M.S. in Computer Science
Tallahassee, FL

Florida State University

- **Relevant Coursework:** Distributed Systems, Advanced Database Systems, Data Communications, Data Mining, Machine Learning

B.Tech. in Computer Science
Chennai, India

SRM Institute of Science & Technology

PUBLICATIONS & AWARDS

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