

Aditya Sugandhi

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SUMMARY

Software Engineer specializing in **autonomous AI agent systems** and **multi-agent orchestration** with **LangChain/LangGraph**, **MCP protocol**, and **Python microservices**. Architected **10+ MCP servers** for enterprise AI tooling; designed **multi-agent RAG pipelines** with vector databases processing production workloads. Built asynchronous systems handling **35k+ devices** with **99.2% accuracy**. Experience with **NLP/NER pipelines**, **prompt engineering**, and **AWS cloud infrastructure**.

TECHNICAL SKILLS

- **AI/Agent Systems:** LangChain, LangGraph, MCP Protocol, Claude Code, OpenAI API, Multi-Agent Orchestration, RAG Pipelines, Prompt Engineering, Function Calling
- **ML/NLP:** NER/NLP (spaCy, Transformers), Vector Databases (ChromaDB, Qdrant), Embeddings, Semantic Search, MLflow, LLM Integration
- **Languages:** Python, Go, JavaScript/TypeScript, Java, Scala, SQL, Bash
- **Cloud/Infrastructure:** AWS (EKS, EMR, ECS Fargate, MSK, S3, CloudWatch), Docker, Kubernetes, Terraform, Kafka
- **Backend & APIs:** FastAPI, gRPC, PostgreSQL, MongoDB, Redis, REST/GraphQL, Async Programming (asyncio)
- **Observability:** Prometheus, Grafana, CloudWatch, Distributed Tracing, MLflow Monitoring

WORK EXPERIENCE

BAS Software Developer

Florida State University

Nov 2024 – Present

Tallahassee, FL

- Architected **AI agent ecosystem using Claude Code with 10+ MCP servers**; built **3 custom MCP servers** for Oracle DBMS operations and BACnet device management, improving developer workflow efficiency by **60%** across **15+ engineering teams**.
- Developed **asynchronous network scanning microservices** using Python asyncio to scan **172+ networks simultaneously**; processed **35k+ panels**, discovered **3,500+ new devices**, reducing manual discovery by **85%** with **99.2% accuracy**.
- Designed **claudecode.yml CI/CD integration** for GitHub workflows; automated **AI-assisted code reviews** and deployment pipelines across dev/stage/prod, reducing deployment time by **70%**.

Machine Learning Researcher

Prof. Olmo Zavala Romero — FSU

Jan 2023 – Aug 2024

Tallahassee, FL

- Architected **ML pipelines over 1TB+ datasets** with LLMs/GenAI/NLP; implemented **vector embeddings and semantic search** using Transformers and vector databases, monitored via Grafana/MLflow with automated drift detection.
- Built optimized **Spark (Scala/PySpark) jobs** on Kubernetes/EMR for windowed aggregations; achieved **+40% throughput** and **99% job success rate** through shuffle and partitioning optimization.
- Implemented **async processing patterns** and batch optimization, reducing **ML pipeline runtime by 50%** while maintaining model accuracy.

Software Analyst

Aspire Systems

Oct 2020 – Jul 2022

Chennai, India

- Led **monolith-to-microservices migration on AWS EKS**, architecting event-driven services with API gateways; improved availability to **99.5%**, reduced costs by **20%**, enhanced deployment frequency **5x**.
- Developed **ETL pipelines with parallel processing**; boosted throughput by **35%**, reduced data quality issues by **80%**.

PROJECTS

- **Multi-Agent Sales Automation (LangGraph)** [GitHub](#) — Architected **21-node AI agent workflow** using **LangGraph** for automated B2B lead research. Implemented **RAG with ChromaDB**, integrated 5+ APIs (LinkedIn, Serper, YouTube), built **conditional routing logic** with CRM sync. Tech: **Python, LangGraph, LangChain, ChromaDB, FastAPI**.
- **Executive Intelligence Dashboard (Multi-Agent)** [GitHub](#) — Built **3-agent AI system** (Market Intelligence, Strategic Reasoning, Executive Synthesis) using **NVIDIA Nemotron models**. Implemented **13 function-calling tools**, dual-collection **RAG pipeline**, FastAPI backend with health monitoring. Tech: **Python, FastAPI, ChromaDB, NVIDIA NIM API**.
- **Financial Data Extractor (NLP/AI)** [HuggingFace](#) — AI-powered platform using **NER and vector databases** for semantic search. Integrated LLM APIs for automated insights; processes **1000+ documents with 95% accuracy**. Tech: **Python, spaCy/Transformers, Qdrant, OpenAI API**.

EDUCATION

Florida State University

M.S. in Computer Science

Aug 2022 – May 2024

Tallahassee, FL

- **Relevant Coursework:** Data Communications, Advanced Database Systems, Cryptography, Data Mining

SRM Institute of Science & Technology

B.Tech. in Computer Science

Aug 2016 – May 2020

Chennai, India

PUBLICATIONS & CERTIFICATIONS

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