

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 claudicode.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)