Adithya Swarna

sssnvadithya@gmail.com • LinkedIn : Adithya Swarna • +1 (951)-544-7715 • San Jose, CA

Summary

Results-driven **Software Engineer** with **4+ years** of experience designing scalable backend architectures, integrating **AI/LLM pipelines**, and delivering production-ready systems in **fast-paced startup environments**. Proficient in **Python, Node.js, AWS, and distributed systems,** with proven ability to learn and deploy new technologies rapidly. Experienced in **building CI/CD pipelines, optimizing APIs, and automating workflows** for AI-powered and data-intensive applications. Passionate about leveraging **AI, automation, and modern cloud infrastructure** to build intelligent, high-impact software solutions.

Skills

Programming Languages: Python, C, PL/SQL, JavaScript, CUDA C, C#, Go (Basics), HTML, CSS, Bash
Core CS: Data Structures, Algorithms, OOPs, OS, CN, DBMS, System Design, Problem Solving
AI/ML: Machine Learning, NLP, RAG, AI Agents
Frameworks/Libraries: Flask, Fast API, Selenium, Node.js (Basics), React.js (Basics), ASP.NET, WPF (Basics)
Cloud & Architecture: AWS, GCP (Basics), OCI, Monolithic, Microservices, Distributed Systems
DevOps & CI/CD: Docker, Kubernetes (Basics), Git, GitHub, GitHub Actions, CI/CD Pipelines
Databases & Tools: MongoDB, SQL (PL/SQL), Oracle Database, DynamoDB, PostgreSQL, MATLAB, LabVIEW, Cadence, Proteus, Arduino, Visual Studio, MS Office

Work Experience & Projects

Software Engineer - Techtapp - Remote, USA **Jan 2025 – Present**

- Took complete ownership of **backend microservices** in a fast-paced startup, building and scaling systems using **Python, Node.js, and AWS** with a focus on reliability and modular design.
- **Integrated AI/LLM workflows** into production — enabling model selection, script generation, and automated video creation — directly enhancing user engagement and product value.
- Rapidly **learned and implemented new frameworks** and tools like FastAPI, Docker, and GitHub Actions, contributing to faster development cycles and deployment efficiency.
- Designed and deployed **CI/CD pipelines** that cut release times, ensuring smooth, fault-tolerant updates across cloud environments.
- Collaborated closely with founders and cross-functional teams to **deliver production-ready features under tight deadlines, demonstrating startup-level agility and ownership.**
- Contributed to architectural discussions and **optimized data pipelines and API integrations**, ensuring scalability for AI-driven and user-facing components.

Software / IT Support (Student Assistant IV) - University of California Riverside - Riverside, USA **March 2024 – March 2025**

- Developed **Python and Bash scripts** to automate internal IT processes, **enhancing operational efficiency.**
- Provided system support across Windows, macOS, and Linux environments.
- Assisted with **infrastructure maintenance, scripting, and process optimization.**

Systems Software Engineer - Tata Consultancy Services (TCS) - Hyderabad, India **January 2021 – July 2023 (2 Years 7 Months)**

- Took full ownership of **automating HR workflows** with Python scripts, **reducing manual processing time by 40%** and improving operational accuracy.
- Raised the bar by **optimizing SQL** queries for **large-scale Oracle HCM** systems, reducing latency, and improving report response times.
- Integrated **REST APIs** to streamline data exchange between Oracle HCM and third-party platforms, enhancing cross-system reliability.
- Led **performance tuning initiatives** in high-traffic modules, directly impacting system responsiveness during peak load hours.
- Collaborated with **cross-functional teams** to support production deployments & deliver **client-facing solutions** under aggressive timelines. **Rapidly upskilled in Oracle HCM and delivered business-critical enhancements** with minimal supervision.

Server-side CRUD Application – ALE (Intern Project): Built a client–server CRUD system with C#/.NET (Visual Studio) and a WPF client connected to a Flask API backend and SQLite DB, using **AI-assisted tools** to accelerate development and debugging.
Retrieval-Augmented Generation (RAG) Pipeline (GitHub)**:** Built a scalable RAG system for document summarization and QA using Python, Flask, Chroma DB, and FAISS; optimized for large-scale processing.
YouTube Timestamps Jumper – Chrome Extension (GitHub)**:** Developed an extension to bookmark, jump to, and loop specific video timestamps using JavaScript and persistent storage.
Full Swing 8x8 XOR CAM (IEEE Published)**:** Designed a low-power XOR-based CAM in Cadence gpdk180 with a 20ns search delay; optimized SRAM design and reduced pre-charge logic.
SpaceX Rocket Landing Prediction – ML Model: Built ML models with 87% accuracy for landing predictions using scikit-learn and SQL; performed feature engineering and visualization.

Education

MS in Computer Science & Engineering, University of California-Riverside (3.8 / 4.0) **09/2023 - 03/2025**
B. Tech in Electronics & Communication Engineering, JNTU, Hyderabad (8.48 / 10.0) **09/2016 - 09/2020**

Certifications: **IBM Data Science on Coursera**, **Programming for Everybody**, **Python Data Structures**, **Using Python to Access Web Data**, **Using Databases with Python**.