

Amithesh Sathish

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Summary

AI Engineer and Computer Science graduate with hands-on experience in **LLM fine-tuning, RAG pipelines, and scalable GenAI infrastructure**. Internship background in software engineering, data engineering, and AI/ML at Warner Music Group and Quantum Leap Technologies. Skilled at building **autonomous agent workflows**, ML pipelines, and cloud-native systems optimized for 100k+ concurrent users. U.S. Citizen.

Core Skills

- **Programming:** Python, SQL, JavaScript, Java, C++, Bash
- **Frameworks & Libraries:** React.js, Flask, Streamlit, scikit-learn, Pandas, NumPy, PyTorch, LangChain, HuggingFace
- **AI/ML & GenAI:** GPT-4.0, OpenAI API, embeddings, RAG, LLM fine-tuning, prompt engineering, Pinecone, FAISS, agentic workflows
- **Data Engineering:** Apache Spark, ETL pipelines, REST APIs, MySQL, PostgreSQL
- **Cloud/DevOps:** AWS (Lambda, EC2), Docker, Terraform, GitHub Actions, GitLab, Git

Education

The University of Iowa

Bachelor of Science in Computer Science

Iowa City, IA

Expected June 2025

Relevant Coursework: Database Systems, Data Structures & Algorithms, Theory of Computation, Probability & Statistics, Linear Algebra, Software Development

Certifications

DeepLearning.AI Prompt Engineering — AWS Cloud Practitioner — Edureka AI/ML — Udemy Agentic AI — OpenAI API

Experience

Quantum Leap Technologies

Software Engineer Intern

New York, NY

Dec. 2024 – Present

- Led Generative AI and Agentic AI initiatives including LLM fine-tuning, prompt optimization, and autonomous agent workflows.
- Optimized AWS EC2/Lambda infra supporting 100k+ users; reduced API latency by **20%**.
- Designed Spark ETL pipelines with PostgreSQL; reduced batch time from **5 hrs** → **3 hrs**, improving reliability by **15%**.
- Refactored front-end React.js components; improved load speed by **25%** and engagement by **15%**.

Warner Music Group

Software Engineer Intern

New York, NY

Nov. 2023 – Mar. 2024

- Built ML models predicting album/single rankings from **100GB+ data**, improving campaign targeting accuracy.
- Automated ad-targeting strategies, reducing customer acquisition cost by **20%**.
- Applied regression and ensemble methods (XGBoost, Random Forest), increasing predictive accuracy.
- Built Spark + Pandas pipelines; reduced data processing time by **40%**.

Projects

OpenAI Projects (GitHub)

- Built apps with GPT APIs, LangChain, and RAG for summarization, Q&A, and intelligent chatbots.
- Implemented Pinecone/FAISS vector search; scaled document retrieval with latency under 200ms.
- Designed autonomous agent workflows with prompt chaining and role-based reasoning.
- Deployed prototypes with Flask/Streamlit and integrated real-time APIs.

Sanji AI Chatbot

- Developed chatbot with GPT-3.5, Python, and React for recipe generation.
- Improved async backend + caching, boosting response speed by **30%**.

Awards & Leadership

- National Society of Black Engineers – Active Member, 2023–Present
- Dean's List, University of Iowa – 2023
- Hackathon Winner: GenAI Track, University of Iowa, 2024
- Led 3-person team for AI-driven project prototypes in campus AI club