

# Akhil Salla

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## PROFESSIONAL SUMMARY

Machine Learning & AI Engineer proficient in **Generative AI (LLMs, Prompt Engineering, LangChain, HuggingFace)**, Vector Databases, RAG (Retrieval-Augmented Generation), and building **tool-enabled AI agents**. Skilled in the full ML lifecycle—from data ingestion and feature engineering to model deployment, monitoring, and optimization. Adept at deploying scalable AI systems using **Python, TensorFlow, PyTorch**, and **cloud-based MLOps platforms**. Strong background in NLP, conversational AI, and automation, with a proven record of accelerating development cycles and delivering business value through innovative AI solutions.

## SKILLS & ABILITIES

- **Languages:** Python, C++, SQL
- **Generative AI:** LLMs, Prompt Engineering, LangChain, HuggingFace, Transformers, RAG, Vector Databases [FAISS, Pinecone]
- **ML/ Deep Learning:** TensorFlow, PyTorch, NLP, Computer Vision, Scikit-learn, Keras, XGBoost, Predictive Modeling, Deep Learning, Feature Engineering, Model Deployment & Monitoring
- **Data Engineering & MLOps:** Apache Spark, Docker, Kubernetes, Git, CI/CD, AWS SageMaker, GCP AI Platform
- **Visualization & BI:** Matplotlib, Seaborn, Plotly, Power BI, Tableau
- **Tools & APIs:** JupyterLab, Streamlit, Postman, REST APIs, Tool-Augmented Search [DuckDuckGo, ArXiv, Wikipedia]

## EXPERIENCE

### SOFTWARE ENGINEER | NEXQUARE | MARCH 2023 – SEPTEMBER 2023.

- Developed and deployed a **Django REST API** for school fee tracking, achieving **20% cost reduction** in administrative workflows..
- Built a reusable **Automatic Label Encoder** for ML pipelines, cutting feature engineering time by **90%**.
- Designed a **multi-user syllabus management API**, doubling data retrieval speed for 1,000+ daily users.

### DATA SCIENTIST | 21K SCHOOL | AUGUST 2022 – OCTOBER 2022

- Processed and analyzed **5 TB+ data** to drive lead generation and behavior modeling, boosting leads by **30%**.
- Led feature engineering and built high-accuracy ML models to automate administrative insights.
- Implemented reporting automation tools, reducing manual report creation time by **70%**.

## MACHINE LEARNING ENGINEER (PART TIME) | CODVIS | JULY 2021 – APRIL 2022.

- Led a 6-member ML team to release 5 customer-focused features within 3 months.
- Coordinated cross-functional teams to integrate AI into products, reducing dev time by 25%.

## PROJECTS

### AI SEARCH ENGINE WITH TOOLS AND AGENTS| [CODE](#) | [WEBSITE](#)

- Developed a LangChain-based search agent integrating DuckDuckGo, ArXiv, and Wikipedia tools..
- Integrated Groq and OpenAI LLMs for multi-model query handling.
- Built a Streamlit UI for interactive, real-time AI search.
- Implemented modular agent framework for API-driven responses.

### TALK WITH DOCS RAG AND CHAT MEMORY| [CODE](#) | [WEBSITE](#)

- Built a Streamlit app for multi-PDF chat-based querying with context memory.
- Used HuggingFace embeddings + Vector DB for document retrieval.
- Integrated Groq LLM for accurate, context-aware answers.
- Implemented scalable RAG pipeline for efficient multi-doc search.

### AWS DYNAMODB RCU PROVISIONING OPTIMIZATION| [CODE](#)

- Designed a system to finely adjust Read Capacity Units (RCUs), improving throughput allocation efficiency.
- Implemented auto-scaling policies using CloudWatch metrics for seamless capacity adjustments under dynamic load.
- Achieved cost savings by minimizing overprovisioning and preventing throttling.
- Developed infrastructure-as-code modules (e.g., Terraform) for automated deployment and reproducibility.

## EDUCATION

- Bachelor Of Technology In Computer Science and Engineering | July 2022 | Vignana Bharathi Institute Of Technology, Hyderabad, Telangana.

## CERTIFICATIONS

- Deep Learning Specialization — DeepLearning AI
- Machine Learning with Python — Coursera
- AWS Academy Machine Learning — AWS

## AWARDS & ACHIEVEMENTS

- 2nd Place, **Code Hustle** (Inter-College Coding Competition).
- Organizer, **24-Hour Machine Learning Hackathon**.
- Ranger Batch Completion, **Salesforce Training**.