

# Aravinnth

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## Overview —

AI and cloud enthusiast with expertise in Python, Machine Learning, and Generative AI. Passionate about building intelligent solutions using LLMs, RAG, and cloud technologies. Proven track record in innovation through projects like NEPHELE 2.0 and ResQSense.

## Skills

<b>Languages</b>	Python, Java, C, SQL.	<b>Data Visualization</b>	Tableau.
<b>Machine Learning</b>	TensorFlow, Scikit-learn, Keras.	<b>Generative AI</b>	Large Language Models (LLMs),
<b>Web Development</b>	HTML, CSS.		Retrieval-Augmented Generation (RAG),
<b>Data Analysis</b>	Data Cleaning & Preprocessing Exploratory Data Analysis (EDA) Data Visualization		Vector Databases, and Multi-Modal AI (text, image, speech).
<b>Cloud</b>	AWS, Azure.		

## Experience

CDW [Jan2025]

Gen AI Intern

- Developed a sentiment analysis model on the IMDb dataset using NLP techniques and deep learning models like RNNs and LSTMs. Built a Retrieval-Augmented Generation (RAG) system for a document-based AI assistant, leveraging LangSmith, Mistral model, and vector databases for enhanced contextual responses. Created an AI-powered Quiz Generator bot using the Mistral model, optimizing retrieval strategies for improved question generation. Designed and deployed interactive user interfaces with Streamlit for seamless user interaction.

**Key Technologies:** Machine Learning, NLP, Hugging Face, Transformers, RNNs, LSTMs, Streamlit, Retrieval-Augmented Generation (RAG), Groq API, Langsmith

## Education

St.Joseph's Institute of Technology

Bachelor of Technology in Artificial Intelligence and Data Science

CGPA : 8.20

### – Projects

- **NEPHELE 2.0—ML and Cloud-Based Robot:** Served as a software developer for the Nephelē 2.0 Community Project, **Voice Interaction Module:** Integrated GenAI LLMs (Meta Llama) on Amazon Bedrock, utilizing Amazon Polly and Amazon Transcribe for voice-based communication. **Selfie Module:** Developed a feature using AWS S3, OpenCV, and SES for capturing and managing event-related images. **Resume ATS Parser:** Built a resume scanner and reviewer with GenAI-powered recommendations for candidate profile optimization. **Automated Lecture Module:** Enable immersive lectures by integrating PPT slideshows with Amazon Polly for text-to-speech narration.
- **ResQSense—AI-Powered Emergency Response System:** Developed an AI-driven multi-transcript audio tool for Cyberpolice to enhance emergency response. Used real-time speech transcription and NLP for faster decision-making. Implemented AI/ML models to analyze emergency call data efficiently. Tech Stack: Python, NLP, Speech-to-Text APIs, Cloud Computing.
- **Quiz Generator using LLM, RAG, and LangSmith:** Developed an AI-powered quiz generator using LLMs, RAG, and LangSmith for dynamic question generation. Optimized retrieval strategies and performance monitoring. Enhanced quiz quality with prompt engineering. Incorporated NLP preprocessing for context-aware question generation and improved relevance. Enabled seamless integration with ChromaDB for efficient vector-based retrieval and scalability.

## Certifications

- AWS Certified Cloud Practitioner, Coursera
- Python for Data Science (NPTEL)
- Microsoft Azure AZ-900: Microsoft
- Data Analysis IBM
- Applied Machine Learning, Coursera