Meeturi Ajay Kumar

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About Me

Driven **Generative AI Engineer** with a strong foundation in computer science and expertise in **NLP, and ML**. I enjoy working on **LLMs, generative models**, and AI-driven applications. Currently exploring **Agentic AI** and advancing my skills in **Gen AI** to expand my skill set and build more advanced AI solutions. Confident in my ability to learn quickly and contribute to **scalable, high-performance** AI systems. Eager to work on cutting-edge AI technologies enhancing human-computer interaction.

Skills

Languages:	Python, Java.
Framework/Lib:	LLM, PhiData, Langraph, Spacy, NLTK, Gensim, Transformers, LangChain, Hugging Face, TensorFlow.
Tools / Platforms:	Docker, Ollama, OpenAI, Groq, GitHub, VS Code, Jupyter Notebook, Google Colab, PyCharm, IntelliJ IDEA.
Technologies:	Gen AI, Agentic AI, RAG, ML, NLP, Text Preprocessing, Embeddings, Vector Databases, Model Deployment.
Databases:	MySQL, Firebase, FAISS, ChromaDB.
Soft Skills:	Team Collaboration, Time Management, Consistent, Continuous Learning.

Experience

Research Intern, Multicoreware Inc.   June 2023 - June 2024

- Collaborated with a talented **team of researchers** to develop **optimized machine learning models** for real-world applications.
- Contributed to developing an age group classification model using **heart rate** and **breath rate data**, applying algorithms to achieve upto **87% accuracy** through **feature selection, hyperparameter tuning**.
- I led the efforts around **hyperparameter tuning and cross-validation**, ensuring that the model was not only accurate but also scalable and robust enough for potential real-world deployment.
- Contributed in developing and optimizing a deep learning-based **air-drawn number recognition system** for touchless interaction in automotive systems, utilizing **TensorFlow, CNNs**, and achieved **80% accuracy** in digit detection by improving preprocessing and **feature engineering techniques**.

Education

Kalasalingam Academy of Research and Education, Tamil Nadu
Bachelor's of Technology in Computer Science & Engineering   Aug 2021 – May 2025
CGPA: 7.70/10.0

Projects

ChatSphere ⌕ 🌐   **Python, LLM, mistral-saba-24b, LangChain, Groq API, Streamlit**

- Built an **AI-powered Q&A chatbot** using Streamlit, **LangChain**, and **Groq API**, enabling **conversational history retention** across multiple sessions with **unique session codes** for seamless retrieval.
- Designed a dynamic UI with a sidebar, allowing users to navigate **past and new chats** effortlessly, while integrating **mistral-saba-24b** for accurate real-time responses.

RAGAI ⌕   **Python, OpenAI API, text-embedding-3-large, FAISS, LangChain.**

- Built an AI-powered **RAG**-based application using **OpenAI's GPT-4o**, **LangChain, and FAISS**, where **web-scraped** content is converted into documents, embedded using **text-embedding-3-large**, and stored for efficient retrieval.
- Integrated **FAISS** for vector search and **OpenAI API** for response generation, enabling fast and contextually relevant answers from the scraped knowledge base.

FinAgent ⌕ 🌐   **Python, Groq API, llama-3.3-70b-specdec, DuckDuckGo, PhiData API**

- Developed a **Multi-Agent System** using **Groq's llama-3.3-70b-specdec**, YFinanceTools, **DuckDuckGo**, and **Phi Data API**, enabling real-time stock data retrieval and web-based financial insights.
- Designed a multi-agent system with a **Phi Playground interface**, where the Finance Agent provides **structured financial data** in tables, and the **Web Search Agent** fetches market trends with cited sources.

Achievements

- **Finalist (Top 5)** among 50+ teams - 35 hrs Hackathon alongside **industrial developers**, **Mathademia** @ T-Hub, Hyd.
- **5th place (75+ teams)** - 35 hrs **Smart Hacks National** Level Hackathon @ Anurag University, Hyd.
- **1st Runner-up (30+ teams)** - Software Freedom Festival **Model crafting** episode @ KARE, TN.