Sri Charan Thoutam

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in linkedin.com/in/CodeWithCharan   codewithcharan.github.io/My-Portfolio

Education

Ganapathy Engineering College   Sept 2021 - July 2024
B.Tech in Computer Science and Engineering (AI & ML)

- GPA: 7.01/10.0
- **Coursework:** Data Structures, Algorithms, Machine Learning, Deep Learning

Skills

Languages: Python (3 years), SQL (2 years), Bash (3 years)

Technologies: AWS(EC2, ECR, S3, Lambda), LangChain, LangGraph, Qdrant, ChromaDB, RAG(Retrieval-Augmented Generation), Docker, Hugging Face, TensorFlow, PyTorch, FastAPI, Flask, Streamlit, Git

Experience

Data Science Intern   Remote
Innomatics Research Labs ↗   Sep 2024 – Dec 2024

- Developed and deployed machine learning models for diamond price prediction, achieving 98% accuracy.
- Implemented MLOps workflows with MLFlow and Docker for scalable model deployment.
- Led a 6-member team to develop GenAI-powered Discord bots for text and image generation.
- Authored and published two in-depth Medium articles, "Hacking the System Design" and "Evolution of Language Representation Techniques," covering advanced concepts like search engine architectures, distance metrics, language vectorization techniques, and embeddings.

Projects

Agentic RAG with LangGraph (Personal Project) - AI Blog Search ↗   Jan 2025 - Jan 2025

- Developed an Agentic Retrieval-Augmented Generation (RAG) system using LangGraph, Google Gemini 2.0 Flash, and Qdrant Vector Database, enabling AI-powered blog search and summarization. Implemented an agentic workflow with LangGraph, incorporating decision-making for document retrieval, conditional edges for relevance, rewriting queries and generating refined answers.

Awesome LLM Apps (Open-Source Contribution) - GitHub ↗   Jan 2025 - Jan 2025

- Contributed to a collection of awesome LLM apps with AI Agents and RAG using OpenAI, Anthropic, Gemini and opensource models.

Pharmaceutical Insight Retrieval System (Personal Project) - GitHub ↗   Jan 2025 - Jan 2025

- Developed an advanced Retrieval-Augmented Generation (RAG) pipeline with similarity search for precise query responses. It is designed to help users gain meaningful insights from research papers and documents in the pharmaceutical domain. It uses LangChain, Google Gemini, ChromaDB and Streamlit.

Publications & Achievements

Evolution of Language Representation Techniques   Read Article ↗
A Journey from BoW to GPT   Nov 5, 2024

Hacking the System Design   Read Article ↗
How Search Engines Understand and Deliver Results   Oct 28, 2024

Earned 5 stars in both Python and SQL on HackerRank   HackerRank Profile ↗

Solved 130+ problems on LeetCode   LeetCode Profile ↗