

ADITYA MANOJ KRISHNA

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EDUCATION

Worcester Polytechnic Institute

Bachelor's, Computer Science

August 2023 - May 2027

GPA: 3.8

PROFESSIONAL EXPERIENCE

Cognida.ai

Software Development Intern

Hyderabad, TG, India

May 2024 - August 2024

- Developed a chatbot from scratch to give managers direct access to context-specific information from internal documents, eliminating the need for intermediaries and streamlining access to data such as financial reports, legal documents etc.
- Created an ingestion pipeline using llama_index to transform documents through sentence splitting, title and summary extraction, and keyword generation to allow for a context-based vector search algorithm.
- Built a vector database using Chroma and Azure OpenAI embeddings, achieving a 99.8% reduction in query time (from 5 minutes to 6 seconds) for over 100,000 documents, enabling fast and efficient data retrieval.
- Implemented a streaming query engine on a vector store to facilitate uninterrupted access to large datasets and asynchronous querying using Chroma and Azure OpenAI.

Talitrix

Software Development Intern

Remote

June 2022 - August 2022

- Collaborated with the backend team to develop software for an ex-inmate monitoring watch, tracking vital signs (e.g., heart rate, oxygen levels) and the location of ex-inmates on probation.
- Increased data processing speed and reliability by 67% by introducing parallel processing to handle high-frequency sensor input efficiently.

SKILLS

Programming:C, Java, Git, C++, SQL, Python, Django, SciPy, Matplotlib, LangChain, Neural Networks, Machine learning, Natural Language Processing (SpaCy), Llama Index, Linux, React.js, Node.js, R, Matlab.

Concepts: Machine Organization and Assembly, Object Oriented Programming, Data Structures & Algorithms, Linear Algebra, Discrete Mathematics, Statistics, Probability, Databases, Vector Databases, Operating Systems, Automata Theory.

Languages: Hindi, Gujarati, Tamil, Telugu

PROJECTS & OUTSIDE EXPERIENCE

Buoyancy Simulator

Made for IBDP extended essay

Hyderabad, Telangana, India

October 2022 - December 2022

- Developed code using Python, along with libraries such as Matplotlib, NumPy, and Pandas to simulate and graph the effects of temperature, volume, and density on buoyant force. Analyzed relationships between these variables while considering the effects of salinity, and environmental conditions on density, resulting in accurate predictions of buoyancy behavior and the conditions under which a boat remains afloat.

Formula 1 AI Chat-Bot

HackUmass : https://github.com/Bleedingmetal/f1nab_hackumass

Amherst, Massachusetts, USA

November 2024- November2024

- Developed an AI-powered F1 chatbot using React, Next.js, and Tailwind CSS, delivering a seamless and responsive user experience for real-time race strategy insights.
- Engineered a Retrieval-Augmented Generation (RAG) system with Node.js, Express, and ChromaDB, integrating LangChain and OpenAI embeddings to enable accurate, context-aware retrieval of F1 radio messages and strategy explanations and used Selenium for automated data extraction as well, enhancing accuracy.

HONORS AND AWARDS

- WPI Deans List academic excellence award (Fall 2023, Spring2024)
- WPI Presidential Scholarship
- Second Place and Youngest CEO TiE Young Entrepreneurs Competition: Developed and presented a comprehensive business plan evaluated by a panel of entrepreneurs