Panchakarla Venkat Sai Subash

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Education

University of Cincinnati, Master of Science in Information Technology Jan 2025 - Dec 2026

- **Coursework:** Machine Learning and Data Mining, IT Research Methodologies, Graduate IT Seminar, Azure Data Engineering

Malla Reddy College of Engineering and Technology, Bachelor of Technology in Information Technology Nov 2020 - Jun 2024

- **Coursework:** Data Structures using Python, Object Oriented Programming, Artificial Intelligence and Machine Learning, Database Management System, Operating Systems, Discrete Mathematics (Statistics)

Experience

Generative AI Trainer, NsureGrowth, Kolkata, India. Aug 2024 - Oct 2024

- Conducted **60+** training sessions, mentoring participants, resulting in an improvement in project implementation efficiency.
- Trained attendees on ML workflows, leading to increase in successful model deployments or optimized inference times.
- Taught professionals, covering **20+** use cases, improving adoption rates by **60%** within the team or organization.

Developer - AI & ML, Cybereconn – Haryana, India. Apr 2023 - Apr 2024

- Built a RAG-based application supporting dynamic document uploads, reducing manual search time and improving retrieval accuracy by **98%**
- Developed **12+** AI-powered tools for Vartalap India, increasing content generation efficiency by **94%** and enhancing the user engagement
- Optimized ML models using XGBoost and ensemble techniques, improving the F1 score by **95%**. Conducted EDA on **15+** datasets, identifying key insights that enhanced model performance

Engineer - R & D Intern, Next Education, Hyderabad, India. Nov 2022 - Jan 2023

- Worked on two key software modules, optimizing the Lexile Module to achieve **98%** efficiency, improving text analysis accuracy
- Developed a YouTube Subtitle Timestamp Retrieval system using ElasticSearch and Flask, reducing search latency by **97%** and improving subtitle accuracy

Projects

Dynamic Document Query, Cybereconn Github Repository

- Designed and implemented a Retrieval-Augmented Generation (RAG) application that enables dynamic document ingestion and querying.
- Utilized Python for backend processing and LangChain to streamline interactions between the document and the language model.
- Integrated Streamlit for an intuitive user interface, enhancing accessibility and usability.
- Leveraged ChromaDB for efficient document embedding storage and retrieval.
- Incorporated OpenAI's API to generate accurate and context-aware responses based on user queries.

Research Rivalry Application, Cybereconn Github Repository

- Developed an AI-driven research comparison tool that analyzes and contrasts two recent research papers on a given topic.
- Enabled users to upload research papers manually, allowing for flexible document analysis.

- Utilized Python for backend processing and LangChain for advanced text parsing, summarization, and comparison of research papers.

Stock Market Analysis, Undergraduate Major Project Github Repository

- Built a live and dynamic stock analysis web application that predicts stock values up to four years into the future.
- Integrated FBProphet for time-series forecasting and trend analysis.
- Designed an interactive UI using Streamlit, with HTML, CSS, and JavaScript for an engaging user experience.
- Implemented real-time stock data retrieval and visualization to provide insightful future trends.

Skills

Languages & Tools: Python, SQL, Javascript, Tableau, HTML, CSS

Data Analysis & MLOPS: Exploratory Data Analysis, Data Visualization, BentoML, DVC, MLFlow

Frameworks: Sklearn, Pandas, Numpy, Git, Streamlit, LangChain, Matplotlib, ChromaDB, FAISSDB, LaTeX, OpenAI, Ollama, RAG

Awards

Code-a-thon 2k23: Winner of University level code-a-thon, **Malla Reddy College of Engineering and Technology**, Jan 2022.

Tech-a-thon 2k22: Winner of University level Tech Quiz, **Malla Reddy College of Engineering and Technology**, Jan 2022.

Programming: 5 star programmer, **Hackerrank** & 2 star programmer, **Codechef**

Professional Summary

Motivated and detail-oriented MSIT graduate student at the University of Cincinnati, pursuing advanced expertise in data analysis, machine learning, and software development. Passionate about applying a racial equity lens to data-driven research and public policy analysis. Demonstrated success in developing AI-powered tools and conducting research that translates technical findings into actionable insights for diverse audiences. Eager to leverage strong technical skills and a commitment to social impact in a hybrid, on-site role in Minnesota or Wisconsin.