

Dheeraj Marthand Machiraju

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Education

University of North Texas

Master of Science in Data Science

August 2023 – May 2025

Denton, Texas

Jawaharlal Nehru Technological University

Bachelor of Technology in Computer Science

July 2018 - August 2022

Hyderabad, India

Skills

- **Technical Skills:** Python, R, SQL, NoSQL, SQL, Spark, Docker, Git, Bash
- **Cloud Platforms:** AWS (SageMaker, ECS, Athena), GCP(DataProc, BigQuery)
- **ML & Gen AI:** PyTorch, Scikit-Learn, TensorFlow, Huggingface, MLflow, Langchain, RAG, AI Agents, Langchain, LangGraph
- **Other Skills:** Cross-functional collaboration, Stakeholder Engagement, Mentoring, Effective & Proactive communication

Work Experience

University of North Texas

Graduate Student Assistant

October 2023 - May 2025

Denton, Texas

- Conducted pre-post analysis of career readiness programs using Likert-scale surveys and transformer-based **Aspect Sentiment Analysis (BERT)** on qualitative feedback
- Architected Data Pipelines using Python for UNT's Annual Report, processing **Multi-Source** datasets that increased analytical efficiency by 55% across **7+ Departments**
- Developed Statistical & Predictive Models that powered interactive dashboards, delivering predictive insights to **17 Stakeholders**, directly influencing strategic planning

Green Breathe Innovations

Data Scientist Intern

May 2024 - August 2024

Hyderabad, India

- Designed and deployed an LSTM **Anomaly Detection** model (PyTorch) using IoT sensor data from 50+ air purifiers
- Implemented feature engineering pipelines for structured/unstructured chemical data, achieving 25% faster ROI
- **Containerized preprocessing and model training pipelines** with Docker, orchestrated via GitHub, resulting in reduced reactive maintenance costs by 35%

Bobalicious

Data Scientist Intern

June 2023 - August 2023

Hyderabad, India

- Designed and deployed an **AI-powered inventory management system** using time-series forecasting (Prophet) and demand prediction models, reducing food waste by 35%
- Built **data-intensive backend services** in Python that processed real-time sales data, and seasonal trends to generate automated purchase orders
- Implemented a **conversational analytics interface** using GPT-3 and LangChain, enabling staff to query inventory status and receive replenishment recommendations via natural language

OpenText Corp

Associate Software Engineer

October 2021 - June 2022

Hyderabad, India

- Utilized **SQL** and **Data Manipulation** techniques to analyze and prepare **structured data** from extensive **MySQL** databases, delivering insights to enhance decision-making for web content strategies
- Built **Data Models** and implemented data management workflows to ensure accuracy and consistency across projects
- Enhanced analytics processes by **increasing testing efficiency by 20%** and managing the OpenText Testcase Repository, contributing to **data quality** and **operational improvements** across data-driven initiatives

Projects

Xtended Meridian [Devpost](#)

LLM, Langchain, AI Agents

- Built a RAG system using LangChain and OpenAI embeddings & integrated FAISS vector DB for evaluating insurance claims
- Designed **multi-agent framework** that analyzed 1,000+ claims resulting in 60% faster claim evaluation

AI-Driven Multilingual QA System

Custom Tools, AI Agents, Multilingual Embeddings

- Developed a multi-agent LLM system using **LangGraph** and Grok to address fragmented data access (SQL, NoSQL & PDF) and language barriers reducing query resolution time by 70%
- Built modular Python architecture with error recovery, structured logging and unit testing for reliable pipeline execution

Achievements

- Winner of **Outstanding Skilled Individual** at U.S. 2nd largest Hackathon, HackUTD - [Devpost](#)
- Won **3rd** place at **UNTHackathon 2024** in the fidelity track - [Devpost](#)
- **University of North Texas's Great Grad** for Spring 2025 [Story](#)