

SAI MANVITHA NADELLA

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EDUCATION

Master of Professional Studies in Data Science;

University of Maryland, Baltimore County, *Baltimore, MD* May, 2025

Bachelor of Technology in Electronics and Communication Engineering;

JNTU, *Hyderabad, India*, Aug, 2022

SKILLS

- **Programming Languages:** Python, SQL, C/C++, JavaScript
- **Data Visualization:** Tableau, Power BI, Salesforce Einstein Analytics
- **ETL & Data Integration:** SSIS, Apache Airflow, Kafka, SQL-based pipelines
- **Database Management:** T-SQL, MySQL, PostgreSQL, Cosmos DB, MongoDB, EPIC, Snowflake
- **Big Data Processing:** Apache Spark, PySpark, NoSQL, SSMS, AWS EC2, AWS S3
- **Web Development:** ReactJS, HTML, CSS, PHP for web-based solutions

PROFESSIONAL EXPERIENCE

Product Owner, Developer; *AI-Edumate – AI-Powered Education Platform*

Jan 2025 - Present

- **Tech Stack:** FastAPI, ReactJS, PostgreSQL, LangChain, Hugging Face, FAISS, OpenAI AP
- Developed an AI-powered educational web app that dynamically generates syllabi, assignments, and course recommendations for students and instructors. Integrated Retrieval-Augmented Generation (RAG) using FAISS & LangChain for accurate syllabus retrieval and AI-driven content generation.
- Built a ReactJS-based frontend with FastAPI as the backend, ensuring a seamless user experience for students & instructors. Implemented AI-based syllabus & assignment generation using Flan-T5 and LLMs from Hugging Face.
- Optimized AI inference and retrieval, reducing syllabus generation time by ~40%.

Graduate Research & Teaching Assistant; *Department of Professional Studies, UMBC*

Sep 2024 - Present

- Teaching assistant for Data Structures & Algorithms and Financial Data Science, mentoring students in algorithm optimization, predictive modeling, and financial analytics.
- Assisted Professor in research in Quantum Annealing and Tunneling for Machine Learning using D-Wave tools.
- Provided guidance on Python programming, data structures, and machine learning techniques applied to financial datasets.

Data Analyst; *DataFy Systems*

Sep 2024 – Jan, 2025

- Spearheaded the design and development of the POSWiz app, a comprehensive retail management tool, leveraging HTML, CSS, JavaScript, and PHP to create an intuitive interface and seamless user experience.
- Implemented robust data integration solutions, connecting multiple data sources into a unified framework, ensuring real-time updates and accurate reporting for business operations. Developed and optimized ETL pipelines to process and transform large data volumes, enhancing analytical capabilities and operational efficiency.
- Built interactive dashboards using Tableau, enabling stakeholders to gain actionable insights and make data-driven decisions.

Artificial Intelligence Intern; *Tata Consultancy Services iON*

Oct, 2020 – Dec, 2020

- Conducted sentiment analysis on textual comments and feedback, applying deep learning techniques to accurately predict overall sentiment.
- Designed and implemented a Logistic Regression model and Naïve Bayes Classifier, achieving 89% accuracy by leveraging PorterStemmer for preprocessing and Tf-Idf Vectorizer for feature extraction.

PROJECTS

AI-Powered Retail Sales Optimization Using Big Data Analytics

- Designed ETL pipelines with Apache Spark & PySpark to analyze Walmart sales data, uncover trends, and optimize branch performance using Power BI dashboards.

Stock Price Prediction Using Financial News Sentiment Analysis

- Developed a stock price prediction model by integrating BERT and VADER NLP sentiment analysis with market trends, achieving 90% accuracy.

Job Market Insights: Trend Analysis Using LinkedIn Data

- Processed 1.3M LinkedIn job listings with PySpark & MongoDB, implementing TF-IDF and Cosine Similarity for skill-based job recommendations (90% accuracy).

AWARDS & INVOLVEMENT

Best Graduate Student – Community Engagement Award for leading initiatives to combat student food insecurity through Retriever Essentials and fostering cultural and professional growth as President of the Indian Graduate Student Association at UMBC.