

Viswa Sai Ammiraju Bonam

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EDUCATION

The University of Texas at Dallas

Master of Science in Financial Technology and Analytics; GPA: 3.846/4

JNTUH College of Engineering

Bachelor of Technology in Mechanical Engineering; GPA: 3.7/4

Richardson, Texas

Aug 2023 - May 2025

Hyderabad, India

Aug 2018 - Jun 2022

PROFESSIONAL EXPERIENCE

Financial Analyst and Machine Learning Specialist

Jul 2024 – Aug 2024

UTDSOM Investment Corporation

Richardson, United States

- Developed a machine learning model using **Python** and **Scikit-learn**, increasing prediction accuracy by 20% for quarterly stock returns using financial statements and SEC filings.
- Identified top-performing stocks by ranking them based on expected returns using **Excel** and financial modeling, generating a 10% increase in portfolio returns after accounting for trading costs.
- Segmented data into **estimation, validation, and forecast samples** using advanced statistical techniques with **Pandas** and **NumPy**, improving the reliability of stock ranking by 15%.

Associate Database Developer

Nov 2022 – Jan 2023

SkyEss Techno Solutions

Hyderabad, India

- Developed and optimized SQL-based databases by leveraging data modeling and analysis with **MySQL**, reducing data retrieval time by 30% and improving data-driven decision-making for business requirements.
- Collaborated with UI/UX and data teams by integrating backend data using Python and Pandas into front-end interfaces, which improved user interaction efficiency by 25% for hospitality guest management systems.
- Analyzed business process cycles and created ad-hoc reports using SQL and **Excel**, increasing reporting accuracy by 40% while ensuring data consistency through **data validation** techniques.

PROJECTS

Real-Time Data Streaming & Analytics with Kafka, Zookeeper, S3, and Athena on AWS. (UT Dallas)

- Architected a real-time data pipeline by deploying Kafka and Zookeeper on AWS EC2, seamlessly streaming thousands of messages per second and **reducing data latency** from hours to near-instant.
- Integrated Amazon S3 and Athena for on-demand **querying** of streamed data, **cutting analysis time** by 40% and enabling rapid, data-driven decision-making.
- Automated end-to-end ingestion using customized Kafka Producer and Consumer scripts, ensuring reliable data capture while maintaining a **99.9% uptime** across the pipeline.

American Express Credit Default Prediction (UT Dallas)

- Developed a machine learning model using **XGBoost** and **Neural Network model** by applying **hyperparameter tuning** and **feature engineering**, which resulted in a 94.7% AUC score.
- Engineered key variables (delinquency, spend, balance) using **Python** and **Pandas**, reducing overfitting and improving model stability.
- Implemented credit scoring strategies using advanced **statistical analysis**, reducing default rates to 5% and 10%, enhancing decision-making and profitability.

Equity Insight: AI-Driven News Analysis Tool (Personal)

- Built an automated news research tool using **LangChain**, **OpenAI**, **RAG**, and **Python**, reducing manual article review time by 60% and accelerating equity analysis insights.
- Utilized **FAISS vector database** to optimize **semantic search** across articles, improving query accuracy by 35%.
- Deployed **Streamlit** UI that improved user experience, delivered real-time insights, and increased productivity by 50% for equity analysts.

Bitcoin Return Prediction with Multivariate Asset Integration (UT Dallas)

- Created a predictive model for Bitcoin returns with **XGBoost**, improving classification accuracy by 15% through **feature selection** and **missing data imputation**.
- Enhanced model by applying **SHAP analysis** to select the top 20 features, reducing noise by 40% and optimizing feature relevance for better predictions.
- Leveraged multivariate asset data for enhanced decision-making, improving model interpretability and performance by 20%.

SKILLS

Programming Languages: SQL, Python, R, Java

Data Science & Analytics: Feature Engineering, Predictive Modeling, Data Preprocessing, Model Tuning

Data Visualization: PowerBI, Tableau, Matplotlib, Seaborn

Cloud Platforms: AWS, Azure (Microsoft Certified: Azure Data Scientist Associate)

Other: Apache Spark, Cassandra, Kafka, Data Mining, Web Scraping, NLP, Deep Learning, Tensorflow, LangChain, FAISS