Naveen Morla

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WORK EXPERIENCE

Data Scientist / Software Engineer Jan 2024 – Present

THK Manufacturing of America, Inc.

- Developed and optimized high-frequency trading models using **FastAPI** for rapid data ingestion and processing of market data, enhancing lead time forecasting and inventory management. Implemented advanced caching strategies to minimize latency.
- Engineered features from raw financial data using **Polars** and **PySpark** for accelerated data processing, ensuring efficient handling of large market datasets, and improved model accuracy by 15%.
- Architected and managed containerized **microservices** with **Kubernetes** and **Docker** for scalable big data processing pipelines, implementing **MLOps** practices to streamline the deployment and monitoring of machine learning models in a real-time trading environment.
- Employed **SQL** for complex backend data management and querying of historical market data, integrated **Git** version control, and established **CI/CD** pipelines for streamlined code management, automated testing, and continuous deployment of trading algorithms.
- Utilized **Tableau** for creating visualizations to analyze trading performance and identify areas for optimization. Developed responsive frontend interfaces with **React** and **JavaScript** to enhance user experience and data visualization related to trading strategies.

Data Scientist May 2019 – Apr 2021

Pago Analytics, India

- Designed and implemented resume parsing techniques using **Python** and deep learning libraries to build a Talent Acquisition Management System (TAMS). Integrated **AI** features, resulting in a 30% improvement in hiring efficiency.
- Engineered and deployed an automated hiring process using **AWS Sagemaker**. Collected and labeled 10,000+ resumes for training data, and utilized libraries like **NLTK**, **NLP**, and **Spacy** to analyze data and improve matching accuracy.
- Normalized **SQL** databases, enhancing data handling and system performance by 2X. Collaborated with cross-functional teams throughout the development and deployment process, adhering to **Agile** methodologies.
- Applied analytical skills and creativity in data mining and defining critical **KPIs/metrics**. Communicated insights to stakeholders using **Power BI**. Participated in code reviews and fostered stakeholder relationships.

PERSONAL PROJECTS

High-Frequency Trading Strategy Backtester

- Developed a backtesting framework in **Python** for evaluating high-frequency trading strategies, incorporating real-time market data simulation and transaction cost modeling.
- Implemented reinforcement learning algorithms (**Q-learning**, **SARSA**) to optimize trade execution parameters and maximize profitability under varying market conditions.

Real-Time Market Sentiment Analyzer

- Built a real-time market sentiment analyzer using **LangChain** and Gemini 2.0 Flash-Lite to process news articles and social media data for predicting short-term price movements.
- Utilized **BeautifulSoup** for web scraping and natural language processing techniques to extract relevant information and quantify market sentiment with high accuracy.

SKILLS

Languages:	Python, R, SQL, C++.
Data Science:	Time Series Analysis, Econometrics, Financial Modeling, Algorithmic Trading, Machine Learning, Deep Learning, Reinforcement Learning, Big Data, MLOps, A/B testing, Feature Engineering.
Packages/Tools:	Scikit-Learn, NumPy, SciPy, Pandas, LangChain, Keras, TensorFlow, PyTorch, PySpark, GIT, FAST API, Cloud Computing, Hugging Face Transformers, Bloomberg Terminal, Refinitiv Eikon.
Databases:	MySQL, PostgreSQL, TimescaleDB, InfluxDB.
Statistics/ML:	Statistical Analysis, Predictive Analytics, Statistical Modelling, Linear/Logistic Regression, Time Series Forecasting (ARIMA, LSTM), Volatility Modeling (GARCH), Anomaly Detection, Risk Management.

EDUCATION

BOWLING GREEN STATE UNIVERSITY, OHIO Aug 2021 – May 2023

M.S in Data Science

- Capstone Research Project: Graph Neural Network-Based Anomaly Detection in Multivariate Time Series Sensor Data.

CERTIFICATIONS

- **Coursera:** Python and Machine Learning, Data Analytics.
- **Udemy:** Tableau, PowerBI.
- **Data Camp:** Introduction to R programming and statistics in spreadsheets and Excel.