

Othoniel Joseph

Saddle Brook, NJ 07663

(203) 788 – 1322

ojoseph@mac.com

[LinkedIn](#)

Professional Summary

Graduate student in Computer Science with a focus on Data Science, experienced in developing AI-powered applications and solving real-world problems through data analytics, machine learning, and generative AI. Proficient in Python, SQL, R, and visualization tools with a proven ability to lead cross-functional teams and deliver client-focused solutions.

Expertise

Programming Languages: Python, C++, Java

Software: VS Code, Virtual Studio, Cursor AI, R, Oracle, MS Office

Data Science: Machine Learning, Data Analytics & Modeling, Predictive Analytics, Generative AI (RAG)

Tools & Frameworks: Keras, TensorFlow, PyTorch, Scikit-learn, Flask, FastAPI, Beautiful Soup

Database: SQL, Oracle, Postgres, Data Loading, Querying

Data Visualization: matplotlib, seaborn, RStudio, Power BI, Plotly

Soft Skills: Leadership, Team Collaboration, Stakeholder Communication

Projects & Achievements

Independent Study: Deep Learning Business Analytics

Jan. 2025 – Present

- Developed a Spatio-Temporal Graph Neural Network (ST-GNN) to forecast semiconductor stock prices, achieving a MAPE of 3.2% for large-cap stocks by integrating FinBERT-based sentiment analysis.
- Engineered dynamic graph structures with multi-edge types (price, RSI, MACD, sentiment) to capture evolving financial relationships, improving model stability and reducing validation loss by 94%.
- Built a full machine learning pipeline in PyTorch Geometric, including data collection, preprocessing, graph construction, model training, and evaluation.

AI & Business Solutions

Sep. 2024 – Dec 2024

- Led a team of 4 to develop a full-stack **AI-powered application** within 12 weeks, utilizing Cursor AI, Python, Supabase, OpenAI API, FastAPI, Next.js, and Tailwind CSS, exceeding client expectations.
- Designed and implemented a **Retrieval-Augmented Generation (RAG) system** tailored for real-world client use cases, delivering a successful live demo.
- Designed user interfaces, developed APIs, and managed real-time data flows, creating a working prototype that was highly praised by clients.

Capstone Project**Jan. 2024 – May 2024**

- Solved a classification problem to predict a song's popularity based on rank and 21 aggregated features derived from a dataset of 600 records.
- Performed data preprocessing, visualization, feature selection, and modeling using Logistic Regression, achieving 85% accuracy in predictions.
- Developed a complete data science pipeline from feature engineering to model evaluation, showcasing key insights into factors influencing song popularity.

Machine Learning, Data Warehouse, and Data Mining**Jan. 2024 – May 2024**

- Developed a stock price prediction model using the LSTM algorithm and General Electric stock data, achieving low-loss values by fine-tuning epochs and optimizing model parameters.
- Examined and compared classification algorithms, including KNN, SVM, Random Forest, Decision Tree, and XGBoost, using benchmark datasets to evaluate performance.
- Processed and visualized data using Python libraries such as Pandas, sklearn, numpy, matplotlib, seaborn, Keras, and plotly, delivering comprehensive insights through data visualizations.

Work History

United Way of Greater Newark**Sep 2024 – Present****Data Analyst Intern/Volunteer**

- Conducted research to identify affordable data collection tools, created data models, and presented key insights through dashboards and reports, driving stakeholder decisions.
- Highlighted the impact of the VITA program by building compelling data stories that supported communication and outreach and build visual narratives.
- Led the development of a "Relationship Enhancement Proposal" to boost donor engagement, identifying critical metrics and delivering a board-ready proof of concept.

New York Film Academy**June 2017 – Sep 2022****Teacher**

- Taught 3D modeling and animation software to students, focusing on project management and final deliverables.

Education

Fairleigh Dickinson University, Teaneck, NJ**2022 – 2025**

- Master's in computer science
- Bachelor's in computer science, Cum Laude
- Relevant Coursework: Machine Learning, Big Data Analytics, Data Visualization, AI Development

Bergen Community College, Paramus, NJ**2019-2022**

- Associate's in computer science