UCHE OKONKWO

[Email] | [Website] | [Github] | [LinkedIn] | Open to Relocation

SUMMARY

Full-Stack Quant Data Science with over 5 years of experience in guiding teams to deliver insights and a demonstrated history in data optimization, AI/ML model development, and applying economic insights to deliver business value. Proven ability to build scalable solutions and collaborate across teams, with strong communication skills and a focus on continuous improvement in accuracy and impact. Strong track record of working in fast-paced environments, managing data workflows, and ensuring timely decision-making under tight deadlines.

TECHNICAL SKILLS

Tools and Frameworks: Python (PyTorch, TensorFlow, Keras, Scikit-learn, NumPy); SQL; NoSQL; Hive (via Azure Databricks); Agile (via Jira); Git/GitLab; Kafka; R; Hadoop; Apache Spark; PySpark; Alteryx
Statistical Techniques: Linear & Logistic Regression; XGBoost; Decision Trees; Random Forest; Clustering; CNN; ResNet; Transformers; Dataiku; DataRobot; Generative AI (Large Language Models)
Data Visualization: Tableau; Power BI; Qlik; SAS
Financial & Data Analysis: Financial Modeling; Risk Management; Transactional Data Analysis; Synergy Analysis; Stranded Cost Optimization
Cloud Technologies: AWS (S3, EC2, Lambda); Azure (Data Factory, Synapse, Databricks, SQL); CI/CD Pipelines

PROFESSIONAL EXPERINCE

Business Systems & Data Science Analyst | PPL Corporation December 2023 –Present

- Led teams in administering and optimizing ERP and cloud-based financial systems, improving system uptime by 15% through proactive maintenance, security enhancements, and seamless data integration. Ensured compliance with SOX regulations, enhancing data security and audit readiness, which minimized operational risks and upheld industry standards.
- Designed and implemented automated dashboards using Power BI and Tableau to monitor budget utilization, resource allocation, and energy costs. Reduced manual reporting time by 30%, enabling quicker, data-driven decision-making across finance teams, and facilitating compliance tracking for regulatory audits.
- Applied machine learning models and statistical analysis to forecast spending trends and optimize resource allocation, identifying a 15% improvement in cost efficiency. Leveraged predictive analytics to support strategic planning, resulting in a 20% increase in accuracy for budget forecasts and enhanced overall financial performance for the utility.
- Developed functional requirements and system configurations for onboarding new utility service contracts, including compliance checks and data integration. Collaborated with IT and stakeholders to ensure accurate implementation, reducing onboarding time by 25% and enhancing service delivery.

Advisory Services Associate - Quantitative Solutions & Technology| PwC April 2021 – July 2022

- Optimized client decision-making by developing predictive models for M&A valuations and due diligence, leading to more accurate financial forecasts and risk assessments; models improved forecast accuracy by 25%, reducing the time needed for financial analysis by 30%.
- Increased efficiency by automating data integration and reporting workflows using Python and SQL, cutting down manual processing time by 40% and ensuring faster, more reliable client deliverables within tight project timelines.
- Enhanced client satisfaction by translating complex quantitative findings into clear, actionable insights through interactive dashboards and presentations; achieved a 15% increase in client engagement scores based on post-project feedback.
- Drove innovation by researching and integrating machine learning/AI into client solutions, resulting in 20% higher accuracy in predictive analytics models and opening new revenue streams for clients through data-driven strategies.

Market Research Analyst II| Institute of Social and Economic Research October 2020 – March 2021

- Analyzed large datasets using Python to identify arbitrage opportunities and market inefficiencies, working under time-sensitive market conditions to deliver actionable insights for senior quant researchers.
- Collaborated with senior researchers to deliver concise reports, enhancing the accuracy and reliability of long-term research projects that supported high-stakes investment decisions.

EDUCATION

University of Louisville, Louisville, Kentucky August 2024
Master of Science, Business Analytics
Coursework: Neural Networks; Natural Language Processing; Info Search & Web Retrieval; Cloud Computing
University of Virginia, Charlottesville, Virginia August 2023
PhD Coursework in Economics
Coursework: Mathematics Economics; Econometric Theory; Macroeconomic Theory; Microeconomic Theory & Game Theory
University of Nigeria, Nigeria July 2018
Bachelor of Science (Honours), Economics
Coursework: Financial Economics; Econometrics; Economic Theory; Cost-Benefit Analysis; Public Choice; Law and Economics

DATA SCIENCE PROJECTS

AI-Powered Sentiment-Driven Trading Solution ***link***

- Engineered an AI trading bot using Python, TensorFlow, and BERT for real-time sentiment analysis of financial news and social media, combining insights with LSTMs and technical indicators. Achieved a 15% increase in trade accuracy by dynamically adjusting strategies based on sentiment trends.
- Deployed on Binance via automated APIs, with backtesting results showing a 10% boost in average returns and reduced drawdowns. Delivered rapid, data-driven trading recommendations that effectively adapt to market shifts.

Automated Financial Forecasting Pipeline for Quarterly Reporting ***link***

- Developed and deployed an automated financial data pipeline using Apache Airflow, DBT, PostgreSQL, and AWS S3 to enhance the transformation and automation of financial data for quarterly reporting. The pipeline facilitates data ingestion from NetSuite, optimizing data integration workflows.
- Achieved a 25% reduction in manual data handling through automation, enabling real-time financial analysis and reporting for quarterly reviews. The system's dynamic orchestration improved the overall performance and data management processes.

Real-Time Contextual Retrieval App Using Llama 3.2 ***link***

- Built a real-time Retrieval-Augmented Generation (RAG) application using Llama 3.2, leveraging an open-source stack (Elasticsearch, Python, Hugging Face Transformers) optimized to run efficiently on CPU. Designed the app to integrate large-scale document retrieval with dynamic content generation, providing users with precise and contextually relevant responses.
- Achieved a 30% improvement in query response times by fine-tuning Llama 3.2 models and optimizing data indexing on CPUs, reducing computational overhead. Enabled seamless real-time interaction by streamlining the retrieval process, making the app scalable for deployment on cost-effective hardware setups.

FELLOWSHIP/PROGRAM

Software Engineering Fellow| Headstarter.co, *Remote* August 2024 – October 2024

- Participated in an intensive 14-week software engineering fellowship focused on best practices in coding, debugging, and testing with a primary focus on C++ for performance optimization.
- Collaborated on full-stack development projects utilizing React, Next.js, and MUI, with a focus on deploying real-world web applications, integrating advanced technologies like OpenAI, LLMs, and vector databases.
- Developed expertise in agile methodologies, version control with Git, and CI/CD pipeline automation. Gained experience in using Docker for containerized application management, enhancing the efficiency of the development process.

VOLUNTEER EXPERIENCE

- Community Outreach & Involvement Lead @ POWER Network. A PPL Organization of Women Engaged for Results Group.
- AnitaB.org Mentor