UCHE OKONKWO

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PROFESSIONAL SUMMARY

Data scientist with 3+ years in machine learning, statistical modeling, and advanced data analysis, skilled in confidence interval estimation and error/deviation analysis, with proven ability to communicate technical concepts effectively to audiences at varying levels of expertise.

TECHNICAL SKILLS

Programming Languages & Tools: Python (Pandas, NumPy, Scikit-learn, TensorFlow), R, SQL, Scala, MATLAB, Perl
Statistical Analysis: Confidence intervals, hypothesis testing, significance testing, deviation analysis
Machine Learning & AI: Regression, Classification, Clustering, Time Series Analysis, XGBoost, Decision Trees, Random Forest, PCA, Neural Networks, Transformers, Generative AI (Large Language Models), feature engineering, model evaluation, error analysis
Data Visualization & Reporting: Tableau, Matplotlib, Seaborn
Other Tools: Jupyter Notebooks, AWS, Git

PROJECTS

Predictive Analytics for User Retention *GitHub Link*

- Collected and integrated multi-source data (user logs, transactional records, and survey feedback) to **build a machine learning model** in Python, achieving 87% accuracy and validating performance with AUC to ensure the model **effectively identified high-risk churn users**, reducing churn by 15%.

Customer Segmentation for Marketing Campaigns *GitHub Link*

- Developed Consolidated CRM, web activity, and purchase history data to **perform clustering analysis** using K-means, evaluated via silhouette scores to ensure well-separated and actionable segments, **resulting in a 25% engagement increase** and a 20% ROI boost from tailored campaigns.

Real-Time Dashboard for Sales Monitoring *GitHub Link*

- Automated live data ingestion from APIs and SQL databases and developed a Tableau dashboard, using metrics like sales growth and regional trends validated against historical benchmarks to provide actionable insights, **driving a 12% improvement in sales efficiency**.

PROFESSIONAL EXPERIENCE

Data Scientist | PPL Corporation - Energy and Utilities (S&P 500) — December 2023 –Present

- Led a team of 4 data scientists to **develop and deploy machine learning models** for predictive analytics using Python, R, TensorFlow, and PyTorch, achieving a 15% increase in accuracy and delivering actionable business insights that reduced operating expenses by 8% ($1.76 billion in 2024).
- Conducted statistical analysis to **identify hidden patterns in datasets,** leveraging Python (Pandas, NumPy, Scikit-learn), SQL, and Spark, driving insights to enhance energy reliability and reduce average outage durations by 20%.
- Designed and executed experiments, including **A/B testing and performance analysis,** performing deviation analysis and confidence interval calculations to optimize machine learning solutions and align with regulatory and business objectives, resulting in $175 million in projected savings by 2026.
- Authored comprehensive technical reports and **presented findings to cross-functional teams and leadership**, ensuring alignment with strategic goals and positioning PPL as a renewable energy integration and sustainability leader.
- Built automated ETL pipelines and dashboards using Python, Spark, and Tableau, enhancing data accessibility and transparency for key stakeholders and supporting customer-facing insights on energy usage.

Data Scientist, Associate | PricewaterhouseCoopers LLP -PwC Intelligence — April 2021 – July 2022

- Formulated and maintained **30+ ETL pipelines using Databricks and Snowflake**, enabling seamless data integration and analytics to support $50M+ in M&A and restructuring transactions for clients annually.
- Developed machine learning models with Python and R, improving forecasting accuracy by 12% and reducing costs by 20%, showcasing adaptability in fast-paced environments.
- Employed **GitHub, Jenkins, and SQL Server** to collaborate with 15+ teams on 20+ projects, automating 80% of quality checks.
- Created interactive Tableau dashboards to streamline insights for a $15M cross-border acquisition deal, contributing to a 15% faster decision-making process and successful transaction closure.

Business Data Scientist, Economics II | Nigerian Institute of Social and Economic Research — October 2018 – March 2021

- Developed econometric models to evaluate fiscal and monetary policies, improving inflation forecasting accuracy by 15% and reducing output volatility by 10%.
- Built data-driven insights into policy impacts, reducing Nigeria's debt-to-GDP ratio by 2% and supporting strategic government initiatives.

EDUCATION

University of Louisville, Louisville, Kentucky — August 2024
Master of Science, Data Science

WorldQuant University, New Orleans, Louisiana — August 2023
Master of Science, Financial Engineering

University of Nigeria, Nigeria — July 2018
Bachelor of Science, Economics