

Opeyemi Peter Ojajuni, Ph.D.

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PROFESSIONAL SUMMARY

PhD-trained Applied Scientist and Data Scientist with 8+ years of experience delivering production AI systems that drive measurable business outcomes. Expert in translating research into scalable, data-driven solutions that enhance decision-making, optimize operations, and improve performance across large-scale systems.

PROFESSIONAL EXPERIENCE

- Research Manager (Applied Scientist & Data Scientist)

SU Extended Reality Jags Research Laboratory | Baton Rouge, USA | Feb 2024 – Present

- Built and deployed GenAI RAG system (<30s latency, 100% citation-backed) reducing manual research effort by 80% and accelerating decision workflows
- Built GenAI decision-support system with guardrailed LLM pipelines (AWS PartyRock), delivering 24/7 safe, real-time guidance and improving user trust and response consistency.
- Built XR training platform (digital twins + AI simulations), training 150+ users across 10+ modules with >80% engagement increase.
- Designed and ran A/B tests and experiments, improving treatment precision by 32% and reducing KPI variance by 27%
- Built analytics and telemetry pipelines to track user behavior and cognitive outcomes, enabling continuous product optimization and data-driven decisions
- Collaborated cross-functionally with engineering, research, and product teams to translate insights into scalable, production-ready AI/XR systems aligned with user and business needs.

- Data Scientist Intern

Amazon | Seattle, USA | June 2023 – Sept 2023

- Analyzed 1M+ supply-chain events with temporal and time-series models, improving forecast stability 40% and simulation reliability.
- Applied clustering (k-means) to 10M+ orders histories to identify operation heterogeneity and guide scalable capacity-planning strategies, reducing projected congestion across key regions by 23% and enabling more efficient resource allocation.
- Developed ML-driven storage capacity forecasting models sorting operations under peak-demand variability, reducing projected congestion by 23% and enabling more effective outbound and last-mile automation planning and resource allocation.
- Built PDF/KDE-based synthetic data pipelines, expanding scenario coverage and improving discrete-event simulation robustness and reproducibility for risk-management simulations by 60%.
- Collaborated cross-functionally with applied scientists, simulation researchers, and operations engineering teams to deliver insights that informed automated packaging-workflow optimization and improved peak-load decision making by 40%.

- Graduate Research Assistant (Data Scientist)

Southern University and A&M College | Baton Rouge, USA | Aug 2018 – Dec 2023

- Built ARIMA time-series models for workforce planning, delivering long-horizon forecasts with confidence intervals to guide data-driven diversity and hiring strategies
- Designed controlled VR experiments using hypothesis testing showing statistically significant cognitive gains ($p < 0.05$) in algorithmic and creative thinking
- Reduced 29 variables to 5 validated constructs using EFA/PCA/SEM, creating a scalable, research-grade measurement framework
- Benchmarked ML models (SVM, RF, XGBoost), identifying key drivers of computational thinking via feature importance and ablation studies
- Deployed deep learning and ML apps (TensorFlow, Streamlit), achieving 90% accuracy across 1,000+ users for real-time decision support
- Led UX research linking behavior, cognitive load, and learning outcomes, informing design improvements for immersive systems

- Data Scientist

Hacey initiatives | Remote | Feb 2018 – May 2023

- Developed regression-based predictive risk models to identify high-risk populations and guide targeted

public-health interventions, improving resource allocation efficiency by 25%.

- Collaborated with epidemiologists, field teams, and policy stakeholders to translate analytical insights into scalable public-health interventions.
- Designed data measurement frameworks and dashboards enabling program managers to monitor intervention impact and optimize strategies.
- Engineered distributed ETL pipelines using Spark and AWS Glue, reducing processing time by 40%.

- Network Analyst

Staunton and Lycett Ltd | Nigeria | March 2015 – Feb 2018

- Built predictive regression and anomaly-detection models that improved network-failure detection accuracy by 22%, enabling earlier mitigation across critical systems.
- Analyzed NetFlow, SNMP, and Syslog telemetry to identify root causes of system degradation and inform targeted reliability improvements.
- Designed early-warning mechanisms using threshold experiments and sequential analysis, reducing incident-response latency by 55% and improving operational readiness.
- Delivered statistical insights to both technical and non-technical teams, enabling 6-month proactive capacity and maintenance planning.

EDUCATION

- **Ph.D. in Science and Mathematics** | Southern University and A&M College, USA *Aug 2018 – Dec 2023*
- **M.Sc. in Mobile and Satellite Communication** | University of Surrey, UK *Sept 2013 – Sept 2014*
- **B.Eng. in Computer Engineering** | Covenant University, Nigeria *Sept 2007 – July 2012*

SKILLS

- **Programming skills:** Python, R, SQL, and PySpark
- **Databases:** SQL, MongoDB, Postgres, ChromaDB, Vector Databases, FAISS
- **Statistical Modeling:** A/B Testing, Hypothesis testing, Causal Inference, Time-series, Predictive modeling, Forecasting, OLS Regression, Generalized Linear Models (GLM)
- **AI Packages and Libraries:** NumPy, SciPy, Pandas, TensorFlow, Keras, Theano, Caffe, PyTorch, SciKit-Learn, XGBoost, LightGBM, Hugging Face, Gen-AI, RAG, Langchain, LlamaIndex, Haystack, LangGraph, BERT, GPT-based models
- **Cloud Platforms:** AWS (SageMaker, Bedrock, Lambda, Glue, EC2), Azure ML, GCP Vertex AI, Databricks
- **BI:** Tableau, Power BI, Superset, Looker, Matplotlib, Plotly
- **Governance:** GDPR, reproducibility, data consistency, pipeline governance

CERTIFICATIONS

- Amazon Web Service (AWS) Certified AI Practitioner *July 2025*
- IBM Artificial Intelligence Practitioner. *Jan 2022*