

TOLU A. OLUKOGA

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PROFESSIONAL SUMMARY

AI/ML Data Scientist | Production ML Systems Expert | Business Impact Driver Proven AI/ML leader with 4+ years transforming complex data into \$1M+ business value through scalable machine learning solutions. Expert in end-to-end model development, from research to production deployment, with deep experience in experimentation design and stakeholder communication. Specialized in applied AI systems that drive measurable business outcomes across travel, e-commerce, and enterprise sectors.

TECHNICAL SKILLS

Core Competencies

- Production ML Systems: End-to-end model development, deployment, and monitoring
- Advanced Analytics: Predictive modeling, customer segmentation, time-series forecasting
- Experimentation & Optimization: A/B testing, statistical analysis, conversion optimization
- Business Intelligence: Stakeholder communication, ROI modeling, data-driven strategy

Technical Stack

- ML/AI Frameworks: PyTorch, TensorFlow, Scikit-learn, XGBoost, LangChain
- Cloud & Deployment: AWS (SageMaker, EC2, S3), Databricks, Docker, MLflow
- Data Engineering: Python, PySpark, SQL, ETL pipelines
- Emerging AI: RAG systems, LLM integration, vector databases

PROFESSIONAL EXPERIENCE

AI/ML Data Scientist – Expedia Group, Seattle, WA

Jan 2023 – June 2025

- Led cross-functional ML initiatives with Engineering, Product, and Business teams, ensuring seamless model integration into production systems serving 1.5M+ monthly users
- Architected scalable ML infrastructure supporting real-time inference for personalization engines, achieving 99.9% uptime and <100ms response times
- Established MLOps best practices including automated model monitoring, drift detection, and retraining pipelines, reducing model maintenance overhead by 30%
- Mentored junior data scientists and collaborated with ML Engineers on production

deployment strategies, accelerating team capability development

Machine Learning Scientist Intern – Expedia Group, Seattle, WA

June 2022 – Aug 2022

- Developed predictive models for customer search behavior using time-series analysis and deep learning, achieving 87% accuracy in predicting repeat search likelihood
- Implemented statistical testing pipeline for model performance validation, establishing baseline metrics and significance testing protocols adopted by the ML team

Machine Learning Engineer Intern - Divercity Inc., Los Angeles, CA

May 2021 – Aug 2021

- Built demographic prediction models achieving 92% accuracy using CNNs for product personalization engine
- Established ML development best practices including Git workflows, code reviews, and automated testing, improving team development velocity by 40%

Graduate Research Assistant - University of Louisiana at Lafayette

Aug 2017 – Dec 2022

- Developed segmentation models using unsupervised learning, reducing analysis time from 6 hours to 18 minutes (200% improvement)
- Published 4 peer-reviewed papers on ML applications in engineering, demonstrating expertise in translating complex research into practical solutions
- Created predictive models transforming raw data into actionable business insights, supporting data-driven decision-making.

EDUCATION

- Ph.D., Systems Engineering – University of Louisiana at Lafayette, USA (2022)
Specialization: Machine Learning Applications for Complex Systems Optimization
- M.S., Informatics – University of Louisiana at Lafayette, USA (2022)
Focus: Data Science and Statistical Modeling
- M.S., Petroleum Engineering – Heriot Watt University, UK (2016)
- B.S., Civil Engineering – Obafemi Awolowo University, Nigeria (2008)

KEY ACHIEVEMENTS

- Generated \$1.14M annual profit increase through AI-driven conversion optimization
- Reduced customer segmentation analysis time by 2000% (6 hours → 18 minutes)
- Achieved 92% accuracy in demographic prediction models for personalization
- Published 4 peer-reviewed papers on applied machine learning in engineering
- Established experimentation frameworks adopted across multiple teams