TOLU A. OLUKOGA

(337) 303-6531 | tolu.olukoga@gmail.com | Seattle, WA (open to relocate)

PROFESSIONAL SUMMARY

Machine Learning Scientist with 2+ years of industry experience designing, deploying, and maintaining advanced AI/ML models in production. Expert in deep learning (PyTorch, TensorFlow), NLP (transformers, LLMs), and generative AI, with a proven track record of extracting insights from structured and unstructured data. Adept at collaborating with product managers, and technical leaders to deliver scalable, high-impact solutions. Passionate about leveraging AI to optimize business outcomes and committed to continuous learning.

TECHNICAL SKILLS

- **Programming**: Python, SQL, PySpark, R
- **Machine Learning**: Deep Learning, Transformers, Generative AI, Retrieval Augmented Generation (RAG), NLP, LLMs, Ensemble Methods, Time Series Analysis, Unsupervised Learning, Model Deployment, Experimental Design
- **Frameworks**: TensorFlow, PyTorch, Keras, scikit-learn, pandas, NumPy
- **Big Data & Cloud**: Databricks
- **Data Types**: Structured & Unstructured Data, Text Analytics, Image Data
- **Visualization**: Matplotlib, Seaborn, Tableau

PROFESSIONAL EXPERIENCE

Machine Learning Scientist – Expedia Group, Seattle, WA

2023 – Present

- Designed, developed, and deployed advanced machine learning models for personalization, generating $1.14M in incremental gross profit and demonstrating expertise in production-grade, large-scale model development.
- Built and maintained deep learning solutions (PyTorch, TensorFlow) to extract actionable insights from structured and unstructured user data.
- Implemented predictive algorithms for travel date recommendations, improving conversion rates by 0.21% through robust model deployment and monitoring.
- Leveraged PySpark and distributed computing to analyze petabyte-scale datasets, ensuring scalability and reliability of ML workflows.

- Collaborated with cross-functional teams—including product managers and technical leads—to align ML initiatives with business objectives and deliver measurable impact.

Machine Learning Scientist Intern – Expedia Group, Seattle, WA

2022 – Less than a year

- Engineered models to predict user behavior and enhance search repeat likelihood, directly supporting product innovation.
- Applied rigorous statistical testing and validation to ensure high-quality model performance and reliability.

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

May 2021 – Less than a year

- Built and deployed ethnicity prediction models with >90% accuracy, integrating multiple data sources and advanced ML techniques.
- Led feature engineering and model optimization efforts to extract actionable business insights from complex datasets.

Graduate Research Assistant - University of Louisiana at Lafayette

2017 – 2022

- Conducted applied research in machine learning, deep learning, and predictive modeling, resulting in novel solutions for complex engineering and data challenges.
- Applied unsupervised learning and rigorous experimental design to develop segmentation models that reduced identification time of similar CO_2 projects by 200%, exemplifying efficient large-scale model development and deployment.

EDUCATION

- Ph.D., Petroleum Systems Engineering – University of Louisiana at Lafayette, USA (2022)
- M.S., Informatics – University of Louisiana at Lafayette, USA (2022)
- M.S., Petroleum Engineering – Heriot Watt University, UK (2016)
- B.S., Civil Engineering – Obafemi Awolowo University, Nigeria (2008)

SELECTED PUBLICATIONS

- Olukoga, T. et al., “Ensemble Machine Learning for Predicting Viscosity of Nanoparticle-Surfactant-Stabilized CO2 Foam,” *SPE Reservoir Evaluation & Engineering*, 2022.
- Olukoga, T. & Feng, Y., “Practical Machine-Learning Applications in Well-Drilling Operations,” *SPE Drilling & Completion*, 2021.