**TOLUWALASE A. OLUKOGA**

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**EDUCATION**

**Doctor of Philosophy** – Petroleum Systems Engineering. Expected Dec 2022

The University of Louisiana at Lafayette, USA

* Dissertation: *Practical Machine Learning Applications in the Oil and Gas Industry.*

**Master of Science** - Informatics. May 2022

The University of Louisiana at Lafayette, USA

* Non-thesis

**Master of Science** - Petroleum Engineering. Jun 2016

Heriot Watt University, UK

* Thesis: *A Critical Review of the Injection of Carbon Dioxide in Enhanced Oil Recovery*

**Bachelor of Science** - Civil Engineering. Dec 2008

Obafemi Awolowo University, Nigeria

* Thesis: *The Effect of Periwinkle Shells as Cement Replacement on the Compressive and Tensile Strength of Concrete.*

**WORK EXPERIENCE**

**Graduate Research Assistant** -The University of Lafayette at Lafayette, USA. 2017 – Date

* Applied knowledge of data analysis, machine learning, predictive modeling, statistics, visualization, and other data science techniques to enhanced oil recovery projects.
* Coordinated research and engineering of prediction models. Result could reduce time and cost to know key fluid properties by 50%.
* Developed segmentation models that could reduce time to know similar CO2 projects by 200%.
* Determined optimal conditions for use of surfactants in the enhanced recovery of oil in sandstone reservoirs through simulation studies
* Sourced and prepared unique datasets for Data analytics and Machine Learning research projects
* Converted data into actionable insights by predicting and modeling future outcomes.

**Machine Learning Science Intern** – Expedia Group, Seattle, WA. 05 / 2022 – 07 / 2022

* Developed machine learning models for predicting the likelihood of customers repeating their most recent search.
* Model output serves as input for recommendation systems to increase customer engagement and interaction

**Machine Learning Engineer Intern** - Divercity Inc., Los Angeles, CA. 05 / 2021 – 08 / 2021

* Interdisciplinary team transferring knowledge from image and name recognition models to predict ethnicity
* Developed and deployed a prediction model over 90% accuracy.
* Applied knowledge of Python, Deep Learning, Transfer Learning, Computer Vision, Machine Learning, TensorFlow, AWS (EC2, Sage Maker), MongoDB, Gitlab, and Agile (Scrum) methodologies.

**Graduate Intern** -Chevron Nigeria Limited, Nigeria. 2016 – 2017

* Identified improved oil production opportunity by simulating an oil and gas reservoir to determine optimal well placements
* Identified viable prospective assets for development and production by modeling several reservoirs using IPM suite (Prosper, MBAL, and GAP)
* Matched the historical production and pressures for two Chevron reservoirs to better reflect the behavior of the reservoirs using Schlumberger Petrel.
* Prepared programs of action for various stages of Drilling and Completion activities

**Rig Drilling Supervisor** - Transocean Inc., Nigeria. 2011 – 2015

* Provided expertise and support on a 14-day off-and-on basis offshore on manual Jack-up and 5th generation cyber semi-submersible rigs.
* Mitigated downtime occurrences by maintaining accurate records of all downhole tubular and tool dimensions (i.e., Internal, and external diameter, fish neck, and serial numbers).
* Coordinated the running and cementing of casing strings, running, and retrieving of BOPs and risers, and other operations as required.
* Mentored, coached, and trained subordinate crew members to ensure they had the competence required to work at their next job level.

**Engineer** – Advanced Engineering Consultants, Nigeria. 2010 – 2011

* Designed the beautification details for the BRT Construction Design for Mile 12 To Ikorodu, Lagos Nigeria.
* Prepared blueprints for buildings, roads, and other highway structures, using computer-aided design (CAD) packages like AutoCAD, Civil3D.

**Human Resources Administrative Officer**– Dot Help Inc., Nigeria. 2009 – 2010

* Oversaw daily administrative, personnel, and financial management activities
* Sourced clients and staff to facilitate work engagement relationships.
* Prepared engagement and disengagement contracts

**PUBLICATIONS & PRESENTATIONS**

1. **Olukoga, T.**, Totaro, M., & Feng, Y. (2022). Ensemble Machine Learning for Predicting Viscosity of Nanoparticle-Surfactant-Stabilized CO2 Foam. *SPE Reservoir Evaluation & Engineering*, 1-21. (Journal paper)
2. **Olukoga, T. A.**, & Feng, Y. (2022). Determination of miscible CO2 flooding analogue projects with machine learning. *Journal of Petroleum Science and Engineering*, 109826. (Journal paper)
3. **Olukoga, T. A.**, & Feng, Y. (2021**,** November). Machine Learning Models to Predict the Rheology of Nanoparticle-stabilized CO2 Foam Fracturing Fluid Under Reservoir Conditions. Paper presented at the SPE/AAPG/SEG Asia Pacific Unconventional Resources Technology Conference, Virtual, November 2021. DOI: <https://doi.org/10.15530/AP-URTEC-2021-208308> (Conference paper)
4. **Olukoga, T. A.,** & Feng, Y. (2021). Practical Machine-Learning Applications in Well-Drilling Operations. *SPE Drilling & Completion*, 1-19. (Journal paper)

**JOURNAL REVIEW AFFILIATIONS**

* Journal of Petroleum Science and Engineering
* SPE Drilling & Completion
* SPE Journal

**LEADERSHIP AND PROFESSIONAL AFFILIATIONS**

Association for Computing Machinery

* Member, 2022 – present

Graduate Students Organization, the University of Louisiana at Lafayette

* Vice President, June 2018 – March 2021
* Petroleum Engineering Departmental Representative, 2018 – 2022

American Society of Petroleum Engineers (SPE), the University of Louisiana at Lafayette Student Chapter

* Member, 2017 – present

Reservoir Management Newsletter Editorial Committee, Chevron Nigeria Limited

* Member, 2016

SPE Young Professionals’ Students Engagement sub-committee, Lagos Section

* Member, 2016

**HONORS & AWARDS**

* AnitaB.org GHC Scholar Award (2021)
* OAU-Carnegie Corporation Merit Award (2003)