

# Yomi Raheem

(512) 921-9439 | [oriyomiraheem@utexas.edu](mailto:oriyomiraheem@utexas.edu)

LinkedIn: <https://www.linkedin.com/in/oriyomi-raheem/> Github [github.com/Yomzysteez](https://github.com/Yomzysteez)

## PROFILE

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- Looking to apply machine learning, software development, petrophysics, and formation evaluation principles to build self-optimizing algorithms, high-level analytics, web and desktop applications, and robust databases in wide engineering applications.
- Strong in carrying out duties with hands-on experience in providing meaningful contributions to collaborative research teams.
- Proven track record of programming, data collection activities, and analysis and proficient at performing duties with qualitative and quantitative techniques.
- Seeking full time opportunities

## EDUCATION

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### Doctor of Philosophy, Petroleum and Geosystems Engineering

in view

The University of Texas at Austin

GPA: 3.73/4.00

### Master of Science, Petroleum Engineering

June/2016

Khalifa University of Science and Technology, Abu Dhabi

GPA: 4.00/4.00

### Bachelor of Science, Petroleum and Gas Engineering

December/2012

University of Lagos, Lagos

GPA: 3.68/4.00

## COURSES AND PROJECTS

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- **Machine Learning Applications in Geosciences by Sergey Fomel and Zoltan Sylvester** 06/2022,
  - CNN-RNN Forward Proxy Modeling for CO<sub>2</sub> Monitoring
  - Unsupervised Deep Learning
- **Subsurface Machine Learning by Michael Pyrcz** 08/2021,
  - Comparison of Linear and Non-Linear Machine Learning Predictive Models
- **Massive Open Online Course (MOOC) by IFP School (Total) 04/2016, NMR Acquisition, Quality Control, and Data Processing (Certified by NEXT Schlumberger)** 09/2015, and
- **Reduction of CO<sub>2</sub> Emission by Capture and Storage (Certified by Total Professeurs Associes (TPA))** 09/2014.

## Ph.D. DISSERTATION

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Rock Classification and Estimation of Flow Related Properties Using Data Analysis and Machine Learning Methods (Supervised by Dr. Carlos Verdín)

## RESEARCH EXPERIENCE

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The University of Texas at Austin

**Research Assistant**, 08/2020 to date

- Fast Interpretation of Well Logs Based on Expert Petrophysical Interpretations Performed in Key Wells Using Python; and
- Prediction of Permeability, Capillary Pressure, and Relative Permeability using Deep Learning Techniques.

Khalifa University of Science and Technology, Abu Dhabi

**Research/Laboratory Assistant**, 08/2014 to 12/2016

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- Improved Original Oil in Place (OOIP) evaluation with Saturation Models for better prediction of reservoir performance and development strategies in recovering oil from tight Transition Zones.

## PROFESSIONAL EXPERIENCE

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Halliburton, Texas, USA

**Research and Development (Intern)**, 05/2023 to 08/2023 and 05/2024 to 08/2024

- Developed and validated numerical mud-filtrate invasion simulator;
- Prediction of Formation Testing Spots Using Machine Learning Algorithms; and
- Numerical Simulation of Mud-filtrate Invasion and Development of Proxy/Surrogate Model.

Dharmattangroup, Nigeria

**Reservoir Engineer**, 03/2019 to 07/2020

- Developed a full field development plan, including different developmental and economical scenarios.
- Built dynamic reservoir models based on geo-model developed using Eclipse, INTERSECT with PETREL interface.

Exxonmobil, Nigeria

**Asset Engineer**, 11/2017 to 03/2019

- Production, Injection, and Integrity Surveillance;
- Supported production operations; and
- Planned and executed well work activities.

### Selected Accomplishment:

- Reduced field flare from 50MSCF/D to 0.9MSCF/D with minimal oil impact and improve reservoir management by reducing uneconomic voidage in reservoirs to arrest pressure decline.

Total Exploration and Production, - Lagos, Nigeria

**Production Performance Engineer (Intern)**, 03/2011 to 08/2011

- Prepared accurate, reliable, and timely production reports and Implemented AKPO's mass balance and allocation principles;
- Initiated and proposed production improvement studies with AKPO Process department; and
- Performed optimization and troubleshooting studies in conjunction with Offshore Technical Support team, and Prepared and updated procedures and guidelines for the safe execution of condensate production.

### Selected Accomplishment:

Developed a Plant Information (PIExcel) mass balance tool for the entire AKPO Field Operations team that solved produced water metering imbalance to better ascertain the crude oil quality.

## SKILLS

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### Softwares

Python, Techlog, Interactive Petrophysics (IP), 3D University of Texas at Austin Petrophysical and Well-Log Simulator (UTAPWeLS), Matlab, Eclipse, C/C++, & SQL.

### Strengths

- Creative, committed to career building, and immense desire for human growth,
- Verbal and written communication skills,
- Problem-solving and ability to take initiative,
- Highly organized, and time-conscious together with the ability to multitask.

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## HONORS AND AWARDS

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- S.P. Yates Memorial Endowment for Graduate Fellowships in Petroleum Engineering, 2022-2023
- Outstanding Petrophysics Journal Reviewer (SPWLA), 2022
- Afren Management Endowed Graduate Fellowship (Afren USA Inc), 2021-2022
- Hildebrand Fellowship (UT Austin Petroleum and Geosystems Engineering Department), 2020
- Award of Excellence as The Media Officer (The Petroleum Institute SPE Student Chapter), 2016
- Award of Excellence for First Class Academic Status (UNILAG Student Affairs Division), 2007-2012

## INTERESTS

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Formation Evaluation, Machine Learning, Software Development, Petrophysics, Reservoir Engineering, and Carbon Sequestration

## SELECTED PUBLICATIONS

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1. **O. Raheem**, W. Pan, M. Morales and C. Torres-Verdín: "Best Practices in Automatic Permeability Estimation: Machine-Learning Methods vs. Conventional Petrophysical". **Petrophysics**, 65 (05).
2. **O. Raheem**, Wen Pan and C. Torres-Verdín: "Best Practices in Automatic Permeability Estimation: Machine-Learning Methods vs. Conventional Petrophysical". SPWLA 64th Annual Logging Symposium, Lake Conroe, Texas, June 10-14, 2023, SPWLA-2023-0084.
3. **O. Raheem** and M. H. Hashem: "Using NMR T2 to Predict the Drainage Capillary Curves (Pc-Sw) in Carbonates Reservoirs". SPE Reservoir Characterization and Simulation Conference, Abu Dhabi, UAE, 8 – 10 May, 2017, SPE-185989-MS.
4. A El-Husseiny, S Vega, **O. Raheem**, S Nizamuddin: "Variations of Acoustic Velocity as Function of Brine and Oil Saturation in Carbonates". Variations of Acoustic Velocity as Function of Brine and Oil Saturation in Carbonates, DOI: doi.org/10.3997/2214-4609.201702461.
5. **O. Raheem** and H. Belhaj: "New Saturation Functions for Carbonate Reservoirs TZs based on Fundamental Petrophysical Properties". ADIPEC, UAE, 7-10 November, 2016, SPE-182991-MS.
6. P. Pinto, H. Belhaj and **O. Raheem**: "Using Thomeer hyperboles for Rock typing in a Tight Carbonate Reservoir". ADIPEC, UAE, 7-10 November, 2016, SPE-183256-MS.
7. **O. Raheem** and H. Belhaj: "New Saturation Functions for Tight Carbonates Using Rock Electrical Properties at Reservoir Conditions". International Symposium of the Society of Core Analysts, Snow Mass, Colorado, USA, 21-26 August 2016, SCA2016-055.
8. Khawaja, M. H. Hashem, M. O. Fernandez, and **O. Raheem**: "An Effluent Stream Treatment & Analysis System (ESTAS) to Counteract Water Availability & Usage Issues for Unconventional Oil & Gas Resources". SPE Argentina Exploration and Production of Unconventional Resources Symposium, Buenos Aires, Argentina, 1–3 June 2016, SPE-180993-MS.

## PROFESSIONAL AFFILIATIONS

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Society of Petroleum Engineers (SPE), Society of Petrophysicists and Well Log Analysts (SPWLA), Emerging/Young Professionals (YP) Network, Toastmasters International, and Junior Chambers International (JCI) Network.

## LEADERSHIP ROLES

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**Events Officer**, Society of Petrophysicists and Well Log Analysts (SPWLA), 10/2022 to date

**Media Officer**, Graduate Students Committee & SPE Petroleum Institute Chapter, 08/2015 to 08/2016

**President**, SPE UNILAG Chapter, 09/2011 to 09/2012

**Secretary General**, SPE UNILAG Chapter, 09/2010 to 09/2011

**Vice President**, SPE UNILAG Chapter, 09/2009 to 09/2010

**Class Representative**, Petroleum Engineering Class, 09/2007 to 09/2011