

Teslim Olayiwola

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EDUCATION

- Louisiana State University (LSU)** Baton Rouge, USA
• *PhD Chemical Engineering; GPA: 4.0/4.0*
Jan. 2021 - Dec. 2024
Minor: Computer Science, Chemistry
- African University of Science & Technology (AUST)** Abuja, Nigeria
• *MSc Petroleum Engineering; GPA: 3.64/4.0*
Jun. 2016 - Dec. 2017
- Ladoke Akintola University of Technology (LAUTECH)** Ogbomoso, Nigeria
• *BSc Chemical Engineering; GPA: 4.62/5.0*
Jan. 2011 - Dec. 2015

SKILLS SUMMARY

- **Languages:** Python, SQL, MATLAB
- **Machine learning:** Scikit-Learn, TensorFlow, Keras
- **Tools:** GROMACS, LAMMPS, VMD, Gaussian
- **Platforms:** Linux, Git
- **Soft Skills:** Research, Leadership, Event Management

EXPERIENCE

- Cain Department of Chemical Engineering, Louisiana State University** Baton Rouge, US
• *PhD Candidate (Full-time)*
May 2022 - Present
 - Building data-driven model for Electrochemical system.
 - Multi-scale modeling of chemical processes using machine learning.
- Dhahran Techno Valley** Dhahran, Saudi
• *Research Assistant (Contract)*
Jan 2019 - Dec 2020
 - Designed and conducted quantitative research on the application of molecular dynamics study in polymer & surfactant studies.
 - Presented research results in the form of journal manuscripts and presentations.
 - Secured a KAUST Shaheen II research grant worth USD 26,000 in collaboration with my Professor.

PROJECTS

- **Generalized Hybrid Modeling Framework for Electrochemical Separations:** (Work in progress) Building a framework that exploits compositional modeling and Machine Learning to develop physics-aware models for electrochemical separations systems. Tech: Python, Pymoo, Scikit-Learn, & Tensorflow (Ongoing)
- **Feature Embedding for Modeling Separation Processes:** Leveraged on Molecular Dynamics data to enhance the modeling on Polymeric Membrane Design for Electrochemical Separation. Tech: Python, Pymoo, Scikit-Learn, LAMMPS, HPC, & Tensorflow. (Dec '22)
- **Machine learning-based approach for cement design:** Proposed and published a scientific article on a machine learning framework to predict the compressive strength of ternary-blend cement materials. Tech: Python, MATLAB, Scikit-Learn (Feb '20)
- **Insights into atomistic Study of Partially Hydrolyzed Polyacrylamide (HPAM) polymers for Enhanced Oil Recovery application :** Designed and proposed structural upgrades to HPAM polymer for usage in high temperature and high salinity water with the aid of molecular dynamics tools. Tech: GROMACS, HPC, Python, & Gaussian (Dec '20)
- **Interfacial phenomenon of anionic and cationic surfactant of same hydrocarbon length:** Studied the effect of surfactant charged head group on the interfacial dynamics between water and hydrocarbon. Tech: GROMACS, HPC, Python, & Gaussian (Dec '20)

PUBLICATIONS (AT LSU)

- **Conference: Feature Embedding of Molecular Dynamics-Based Descriptors for Modeling Electrochemical Separation Processes):** To be published in Computer Aided Chemical Engineering (June 2023). Tech: Python, Scikit-Learn, Pymoo, Matplotlib, Seaborn
- **Journal: On the integration of machine learning and molecular dynamics for the estimation of ion activity coefficient in membranes:** Manuscript in preparation. Tech: Python, Scikit-Learn, Pymoo, Matplotlib, Seaborn

HONORS AND AWARDS

- Omicron Delta Kappa, 2022; Gamma Beta Phi, 2022; George Daniel Fellowship, 2021
- LSU Graduate Assistantship, 2021; SPE African Regional Paper Contest Winner (BSc & MSc), 2017

VOLUNTEER EXPERIENCE

- **Vice President at LSU Chemical Eng. Graduate Student Association** Baton Rouge, USA
• *Assisted in organizing events for Chemical Engineering Graduate Students.*
May 2022 - Present
- **Vice president at LSU African Graduate Student Association** Baton Rouge, USA
• *Deputized for the president & managed the affairs of over 45 African Graduate Students.*
May 2022 - Present