

Abdulmuiz Ajibola Adekomi

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PROFESSIONAL HEADLINE

Results-driven engineer specializing in optimizing energy resources and data-driven sustainability solutions. Proven track record in subsurface resource management, carbon reduction technologies, and synthesizing complex data into actionable insights. Actively seeking summer internship opportunities and willing to relocate.

EDUCATION

University of Texas at Austin

PhD Petroleum Engineering (4.00/4.00)

May 2027

University of Texas at Austin

MS Petroleum Engineering (3.83/4.00)

May 2024

University of Lagos

BSc Petroleum and Gas Engineering (4.55/5.00 with top 5% Honors)

Jan 2018

WORK EXPERIENCE

Graduate Research Assistant

Centre for Energy and Environmental Systems Analysis (CEESA), UT Austin

August 2024–Present

- Conducting cutting-edge research projects on enhanced methane monitoring, emissions reduction strategies, and sustainable energy systems.
- Applying Root Cause Analysis techniques, data modeling, and statistical & machine learning methods to model and analytically predict the frequency and rates of emission failures events.
- Reconciling aerial observations with operational data to develop basin level measurement-informed emissions inventory estimates that account for intermittency.

Graduate Research Assistant

Centre for Subsurface Energy & Environment, UT Austin

August 2022–July 2024

- Developed a novel high-efficiency, surface-active solvent for carbon capture, outperforming conventional amines and enhancing cost-effective direct air carbon capture pathways, validated through laboratory studies.
- Optimized carbon-dense formate solutions for CO₂ Enhanced Oil Recovery (EOR) and carbon storage application using simulation studies.
- Developed a bipolar membrane-electrodialysis (BPED) separation system that significantly reduces regeneration energy consumption in carbon desorption applications.

Reservoir Operations Engineer

Matrix Energy Group

January 2021–August 2022

- Developed comprehensive field development plans (FDP) and resource evaluations for key oil fields/reservoirs, realizing 15% cost savings compared to the pre-acquisition budget of the assets.
- Optimized subsurface well logs, well test data, PVT, and production data for reservoir characterization, production optimization, and maximizing recovery, resulting in successful field campaigns.
- Successfully led the in-house energy transition team on the company's energy projects and assets within the reservoir management, downstream, and cross-functional teams that achieved a 20% reduction in carbon intensity within processes and operations.
- Oversaw intra-department environmental impact assessment project and report, ensuring timely delivery.

Business Development and Project Engineer

Petrok Oil and Gas Services Limited

August 2018–December 2020

- Conducted rigorous industry research and data analytics; tracking industry events, publications, and news to identify emerging trends and innovative ideas, positioning the company as a top 10% national industry leader.
- Strategically managed projects with strict adherence to standards, quality assurance/quality control (QA/QC), and HSSE (Health, Safety, Security, and Environment) guidelines, achieving zero major accidents in 2 years.
- Oversaw the efficient execution of RFQ (Request for Quotation) and CFT (Call for Tenders) processes, ensuring timely completion of clients' projects.

OTHER WORK EXPERIENCES

University of Texas Global Sustainability Leadership Impact Program Sustainability Consultant for Terralytiq Company

January 2024–May 2024

- Measured Scope 1 and 3 emissions and developed decarbonization pathways aligned with SBTi criteria, focusing on renewables, hydrogen, biofuels, and CCUS to meet client-specific industrial needs.
- Developed models integrating energy prices, technology costs, life cycle analysis (LCA), and bill-of-material designs, resulting in reduced carbon footprints for U.S. customers.
- Established industry benchmarks for energy use and greenhouse gas emissions to develop model pathways and insights that facilitated clients in achieving significant milestones in carbon footprint reduction.

Sustainability Consultant for Cintra Company

August 2023–December 2023

- Strengthened the company’s position as a top-ranked sustainability leader by conducting a risk assessment and sustainability analysis of climate change and energy transition impacts on major U.S. assets, identifying key strengths, weaknesses, and areas for improvement.
- Conducted sentiment analysis on climate risk disclosures in the U.S. and government policies to forecast market trends and regulatory changes, informing the company’s planning and decision-making process.
- Developed a robust risk assessment matrix and sustainability plan based on statutory guidelines, benefiting from mentorship by senior consultants from McKinsey & Company.

Intern Process Engineer (6-month Undergraduate Internship)

Nigeria Gas Company Limited

July 2016–December 2016

- Prepared daily reports and reviews of operational parameters such as flow rate, ensuring equipment and operations remained at optimal levels, resulting in 5% less downtime compared to the previous half-year report.
- Successfully resolved gas consumption disputes with clients by implementing a rigorous analytical data validation model.

SKILLS/SOFTWARE

- Microsoft: Office Word, PowerPoint, Excel, Outlook, Power BI, and Microsoft Dynamics 365 (ERP).
- Programming Language: Python, SQL, Julia, Tableau.
- Machine and Deep Learning Packages; NumPy, Pandas, SciPy, Matplotlib, Seaborn, Keras, PyTorch.
- Industrial Software: Phreeqc, PVTSIM, PETREL, CSMHYD, Aspen Tech HYSYS, Kingdom, Easitool, TNav, ComboCurve.
- Other Skills: Good analytical and problem-solving skills. Excellent interpersonal and leadership skills. Strong team player. Strong organizational and time management skills. Excellent Data Skill.

PUBLICATIONS & CONFERENCE HIGHLIGHTS

- Adekomi A.A et al. “Enhanced CO₂ Capture-Desorption by Surface-Active Amine.” *Energy & Fuels* 38.15 (2024).
- Adekomi A.A, “Enhanced CO₂ Capture and Desorption Using Surface-Active Tertiary Amines”. *UT Austin Thesis*, 2024.
- Presenter, Energi Simulation IAP on Carbon UT 2024 | *CO₂ Capture as Bicarbonate*.
- Presenter, Latin X Chemical Engineering Conference 2023 | *Cyclic CO₂ Absorption & Desorption Using Surface-Active Amines*.
- Reviewer | *Journal of Artificial Intelligence in Geosciences*.

AWARDS & SCHOLARSHIPS

- Global Sustainability Leadership Institute Impact Fellowship Award (\$1000) – 2024.
- S.P. Yates Memorial Endowment Engineering Fellowship (\$3560) – 2023.
- John and Kelli Weinzierl Endowed Presidential Fellowship in Petroleum Engineering, (\$5000) – 2022.
- Staff of the Year, Petrok Oil and Gas – 2020.
- Seplat JV Undergraduate Scholarship Award – 2017.
- FGN Undergraduate Scholarship Award – 2016.
- Abdulkabir Aliyu Foundation Scholar – 2016-2018.
- Total Exploration and Production Foundation Scholarship – 2015-2017.
- Academic Counseling Seminar MSSN Scholarship – 2014.
- University of Lagos Scholars Grant Award – 2013- 2017.

CERTIFICATIONS

- CO₂ Sequestration Workshop Using Seismic and Well Log Interpretation.
- Data Analytics (Quantum Analytics)
- Well Reservoir and Facility Management (Society of Petroleum Engineer 3 days Course)
- Energy Transition Towards a Low Carbon Future (IFP School France/ TotalEnergies)
- Advanced Microsoft Excel in Petroleum Engineering Applications (Society of Petroleum Engineers)
- Procurement and Logistics (Chartered Institute of Transport and Logistics)
- Project Management (Agile P-3 Limited)
- Lean Six Sigma White Belt (Institute of Strategy and Management)
- Health, Safety, and Environment (HSE Level 1 & 2, International Association of Safety Professionals IASP)

LEADERSHIP ROLES, COMMUNITIES, AND MEMBERSHIPS

- Acting President | Switch Energy Club UT Austin | *2024- Present.*
- Inaugural Cohort | Climate Vine: A global collaboration of diverse climate experts. | *2023- Present.*
- Member | Blair Woods Restoration for Texas Vegetation Conservation Project. | *2023- Present.*
- Vice President | Switch Energy Club UT Austin | *2022- 2024.*
- Project Director | Ummah Welfare Foundation (UWF): A non-governmental charity organization | *2019 - Present.*
- Member | Society of Petroleum Engineers (SPE) | *2015 –Present.*
- Director of Studies | EMSS, University of Lagos | *2014-2016.*
- Laboratory Prefect | Vanguard Academy | *2011-2012.*

INTEREST AND EXTRACURRICULAR ACTIVITIES

Technology, Soccer, Traveling, and Volunteering.