

# RAPHAEL NOEL-BERJE

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## EDUCATION

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<b>Master of Engineering in Petroleum Engineering (M.ENG)</b> <i>University of North Dakota, Grand Forks, ND, USA</i>	<b>Dec. 2025</b>
<b>Bachelor of Engineering in Chemical Engineering (B.ENG)</b> <i>Afe-Babalola University, Ado-Ekiti, Nigeria</i>	<b>Nov. 2021</b>

## WORK EXPERIENCE

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<b>Maintenance Assistant</b> <i>Energy and Environmental Energy Center (EERC), Grand Forks, ND, USA</i>	<b>Jan. 2024 – Sept. 2024</b>
<ul style="list-style-type: none"><li>Ensured building maintenance, repairs (painting, weather stripping), and HVAC overhauls/installations for motors, pumps, and bearings.</li><li>Operated heavy machinery and impact tools, ensuring safe and efficient service in a research environment.</li></ul>	

<b>Chemical Engineer</b> <i>Standard Organization of Nigeria, F.C.T Nigeria</i>	<b>Jan. 2022 – Oct. 2022</b>
<ul style="list-style-type: none"><li>Ensured standard of materials e.g. (Paints, Metallics, absorbents) through inspection, surveillance, and quality control. (NIS “Nigerian Industrial Standards”).</li><li>Managed office systems and filing for registered products and services, supporting regulatory compliance.</li></ul>	

<b>Project Coordinator/Volunteer</b> <i>Ayewosai Global Foundation, Minna, Nigeria</i>	<b>Dec. 2019</b>
<ul style="list-style-type: none"><li>Built capacity for Girl-Child programs and research development, organizing outreach events and fundraisers.</li><li>Handled logistics for CRF (Catholic Relief Fund) project, and office management, contributing to community and environmental initiatives through ACOMIN.</li></ul>	

<b>Industrial Trainee</b> <i>Niger State water and Sewage Treatment, Minna, Nigeria</i>	<b>Jan. 2020 – June. 2020</b>
<ul style="list-style-type: none"><li>Utilized ArcGIS for geo-mapping and location of water sites &amp; appurtenances.</li><li>Conducted water &amp; sewage treatment via distillation and semi-osmosis, ensuring quality standards (NIS).</li></ul>	

<b>Industrial Trainee</b> <i>Dana Pharmaceuticals LTD, Minna, Nigeria</i>	<b>May. 2019 – July. 2019</b>
<ul style="list-style-type: none"><li>Performed quality control and distribution of pharmaceuticals, including demineralization/purification of water.</li><li>Ensured Hazard Analysis and Critical Control Protocols (HACCP) compliance (ISO 9001:2008)</li></ul>	

<b>Industrial Trainee</b> <i>Nigerian National Petroleum Cooperation (DEPOT), Minna, Nigeria</i>	<b>Apr. 2018 – June. 2018</b>
<ul style="list-style-type: none"><li>Conducted AGO, DPK, and PMS decantation, ullage metering, and flash point testing.</li><li>Maintained Department of Petroleum Resources (DPR) records for product quality according to (SON)</li></ul>	

## RESEARCH PROJECTS & PUBLICATIONS

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- Pioneered magnesium-doped fly ash nanoparticles (Mg-FANPs) for EOR, achieving 22-37% OOIP recovery via supercritical CO<sub>2</sub> foam in SPE (<https://doi.org/10.2118/228838-STU>) **ATCE 2025 SPC International Finalist**.
  - Converted biomass (sugarcane bagasse) to ethanol using nano-inclusion simultaneous saccharification and fermentation (NISSF).
  - Synthesized ferrous sulfate to iron oxide nanoparticles for catalytic applications.

## ORGANIZATIONS & LEADERSHIP

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<b>Officer (Secretary), American Association of Petroleum Geologists</b>	<b>Feb. 2025- Present</b>
<b>Officer (Webmaster), Society of Petroleum Geologists (UND Chapter)</b>	<b>July 2024- Present</b>
<b>Member, Association of Energy Engineers (AEE)</b>	<b>Apr. 2024- Present</b>
<b>Member, Nigerian Society of Chemical Engineers (NSCHE)</b>	<b>Nov. 2021- Present</b>
<b>Member, Nigerian Society of Engineers</b>	<b>Nov. 2021- Present</b>

## SKILLS

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AI & Prompt Engineering, Reservoir modelling, CMG STARS, Aspen Plus/HYSYS, Python, Arc GIS, Cloud Computing, Cybersecurity, Sound engineering, Speaking & Presentation, Leadership, Biblical Hebrew (Intermediate)

## CERTIFICATIONS/ AWARDS

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| <ul style="list-style-type: none"><li>SPE (Rocky Mountain North America and Canada) RMNA Regional (MSc) Division Winner</li><li>NSF (National Science Foundation) I-corps Regional Certificate (Great Plains)</li><li>IBM Skills-build certificate on Artificial Intelligence Fundamentals</li><li>IBM Skills-build certificate on Cyber Security Fundamentals</li><li>IBM Skills-build certificate on Cloud Computing Fundamentals</li><li>HSE level 1 award in Health Safety and Environmental Awareness</li><li>HSE level 2 award in Manual Handling and Fire Safety</li><li>HSE level 3 award in Risk Assessment and Safety Evaluation</li></ul> | <b>May. 2025</b><br><b>Feb. 2025</b><br><b>Aug. 2024</b><br><b>Aug. 2024</b><br><b>Aug. 2024</b><br><b>Dec. 2023</b><br><b>Dec. 2023</b><br><b>Dec. 2023</b> |
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