# MACDENNIS I NWAEZE, M.Sc., GIT

713-235-0509 | nwaezemacdennis@yahoo.com | Missouri city, TX 77489
www.linkedin.com/in/macdennis-nwaeze

## EDUCATION

- **University of Houston**, Houston, Texas
  Master of Science in Geo-Sensing Engineering — August 2025
- **University of Texas, McCombs School of Business,** Austin, Texas
  Post-Graduate Program in Cloud Computing (AWS and Microsoft Azure services) — June 2024-till date
- **University of Houston**, Houston, Texas
  Master of Science in Geophysics with specialization in petroleum geophysics — June 2021-December 2022
- **University of Houston**, Houston, Texas
  Bachelor of Science in Geology — August 2015-December 2020
  Minors in Mathematics and Geophysics

## SKILLS

**Certifications**: ASBOG Geologist in Training (GIT) Certification, Rig Pass, 3D Seismic Exploration and Interpretation, Sequence Stratigraphy, Structural Geology, Seismic amplitude interpretation, Petrophysics and Formation Evaluation, Geospatial Analysis and Application (GIS), Well Log Analysis, Petroleum Play and Fairway Interpretation

**Programming:** MATLAB, Python, Bash, SQL, Github, JSON

**Software**: Petrel, Kingdom, Petra, ArcMap, ArcGIS, Arc Scene, MS Excel, MS Office, MS Excel, Mainlog, Oasis Montaj, Envi

## GRADUATE MASTERS THESIS
December 2022

Identifying mechanisms responsible for misties between the synthetic seismogram and the seismic (Delaware basin)

## ABSTRACT-UNDERGRADUATE THESIS

**Student Leader GSA 2020 Connects Online** — October 2020

Conversion of a field geodesy module on the neotectonics of the northern Rocky Mountains into an online exercise. Geological Society of America Abstracts with Programs. Vol 52, 154-10 - doi: 10.1130/abs/2020AM-357590

## RESEARCH EXPERIENCE

**Houston Subsidence Monitoring and GPS Data Processing Center** — September 2018 - March 2020
**University of Houston**

- Collected field and structural land subsidence data for monitoring and instrumentation
- Implemented GPS seismology data to detect strong earthquake ground motion
- Applied knowledge of GPS and LIDAR technologies in natural hazards studies
- Analyzed geological hazards and risk mitigation utilizing geological graphical methods

## DESIGN PROJECTS

- **Near-Surface Geophysics**: Processed 2-D resistivity data using the SLB Vista software. Produced a velocity section and a stacked velocity section, identified a salt ridge from the processed data, and located faults, pinch-outs, and relevant reflection events from the section
- **Geospatial Analysis and Application (GIS)**: Analyzed the relationship between the population density and confirmed COVID-19 cases in Texas using the ArcGIS-ArcMap software. Proposed emergency testing in Harris County, Texas.
https://nwaezemacdennis.wixsite.com/website
- **Potential Field Methods:** 2D hands-on modeling; Using the Oasis Montaj software program to model gravity and magnetic data in the Santos Basin, offshore SE Brazil; which is a salt basin located in a Cretaceous passive margin
- **Seismic amplitude interpretation:** Using the TIPs thin bed modeler by HSB geophysical, modeled the thin bed reflectivity response of brine and hydrocarbon saturated reservoirs from well log curves. Interpreted the AVO response of brine and hydrocarbon-saturated reservoirs and classified the AVO reflection response as defined by Rutherford and Williams, 1989
- **3D Seismic exploration:** Utilized Petrel to conduct seismic attribute analysis, structural modeling, and time-depth conversions to interpret Direct Hydrocarbon Indicators (DHIs), identify potential drilling hazards, and pinpoint optimal reservoir targets

## PROFESSIONAL EXPERIENCE

**XRF QAQC Data Analyst (HYBRID)** — November 2024-till date
**Diversified Well Logging LLC, Conroe, Texas**

- Perform detailed analysis of mudlogging data using X-Ray Fluorescence (XRF) to determine mineral composition and assess hydrocarbon content in real-time during drilling operations, while ensuring strict adherence to industry standards and regulatory compliance
- Oversee XRF elemental data entry and analysis using Microsoft SQL Server to maintain data integrity and detailed reporting
- Generate comprehensive data reports using Microsoft Power Bl and SQL to support geological evaluations and guide drilling operations for oil and gas companies

**WELLSITE MUDLOGGING GEOLOGIST (HYBRID)** — February 2023-November 2024
**Diversified Well Logging LLC (South Texas division: Eagle Ford and Haynesville-Bossier basins)**

- Monitor and evaluate a broad range of surface indicators to compile a concise record of subsurface geology (well log), hydrocarbons and gases encountered (C1 to C5), and significant drilling events
- Interpret real-time geological data to guide wellbore placement, optimizing drilling operations and ensuring wellbore stability
- Utilized X-ray fluorescence analyzer to determine the elemental composition of acquired cutting samples and use these elemental data to create an elemental gamma (EGR) log and for geo-steering the well
- Contribute to post-drill evaluations, analyzing well performance and geosteering results to improve future well planning.

**SUMMER SUPPORT TECHNICIAN** — June 2019 – August 2019
**Texas Department of Transportation (Maritime Division), Austin, Texas**

- Assisted waterways coordinator with duties related to TxDOT's role as the non-federal sponsor of the Gulf Intracoastal waterway.
- Participated in the Dredged Material Placement Area (DMPA) Assessment; created DEM and topological maps utilizing ArcGIS to access the health of these DMPAs
- Visited and evaluated the condition and functionality of Dredged Materials Placement Areas, the Brazos River Floodgates, and Colorado River

## SCHOLARSHIPS & AWARDS

- University of Houston's Engineering Dean Scholarship — August 2025
- St. Elmo Brady STEM Academy Scholarship — January 2020

## ACTIVITIES

- National Society of Black Engineers Region 5 — September 2015-till date
- Geo-society- University of Houston — September 2019 – till date