Divine Kalu

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EDUCATION

- Ph.D. candidate Geophysics, Honors Program (Expected graduation: May 2025) University of Houston. Tx
- M.S. Geophysics (2021), GPA: 3.66 University of Houston, Houston, TX
 - o Honor Society Foundation, Student Government Association, Hall Council member
- B.Sc. Applied Geophysics (2018), GPA: 4.39/5.0 Covenant University, Nigeria
 - Awards: Most Influential Leader, 2nd Best Graduating undergraduate student in Geophysics 2018

SKILLS: Digital fluency | Python | Keras | R | TensorFlow | Numpy | SciPy | Scikit-learn | Gpu | Energy Transition **INTERESTS:** Geophysics, Inversion, Analytics, Machine Learning, Deep Learning, Neural Networks

PROFESSIONAL EXPERIENCE

University of Houston, Houston, TX.

Teaching Assistant - Physical Geology Lab, August 2021 - Present

- Creating and implementing a lesson plan and maintaining daily classroom schedules for the Physical Geology lab.
- Using a variety of instructional and assessment strategies to meet students' need as regards to the course.
- Assisting students with assignments or difficult concepts on physical geology and related fields.

Research Assistant – Data Science on Energy Transition Facilitator, May – August 2022

- Facilitated in the training of 40 cohorts in Data Science and Machine Learning.
- Assisted in organizing the learning structure and logistics of the program.

BGP/CNPC International Nigeria Limited, Nigeria

Field Geophysicist and Data Quality Officer, July 2018 – July 2019

- Provided technical support for resolving data quality issues and daily acquisition operations.
- Maintained document control system to minimize re-acquisition operation time.

ACADEMIC PROJECTS/RESEARCH

Uncertainty Quantification of 3D EM Data using Deep Learning Methods (Aug. 2021 - Present, University of Houston)

- Building an invertible neural network to improve posterior probability density sampling
- Creating a model using Conditional Variational Autoencoders (cVAEs) to quantify uncertainty.

Machine Learning Application in Remote Sensing – Comparison Analysis (Dec. 2021, University of Houston)

- Compared the accuracy and efficiency of remote sensing techniques using the conventional method and machine learning.
- Reviewed the results gotten from conventional practices and those using machine learning platforms.
- Identified the areas where each method proved better in remote sensing.

Seismic Facies delineation using Unet (Feb. 2021, University of Houston)

- Successfully delineated various seismic facies using Unet architecture.
- Qualitatively and quantitatively mapped out 5 different classes based on input parameters.

Quantitative Petrophysical Analysis using machine learning - Case Study in Taranaki Basin, New Zealand (Dec. 2020, University of Houston)

- Completely analyzed and determined the properties of a well using machine learning procedures.
- Identified zones of pay and made a recommendation for the most profitable zones based on my analysis.