Noah Vento

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WORK EXPERIENCE

ExxonMobil

Development Geoscientist – Mozambique LNG Subsurface July 2023 – Present

- Providing quantitative interpretation (geophysics, spectral decomposition, signal processing, remote sensing, etc.) and deep-water stratigraphy support for three reservoirs in world-class LNG project to ensure robust understanding of subsurface uncertainty and proper development of available resources.
- Implemented scripts in VBA and Python to assist Reservoir Engineers in running reservoir model and pipeline simulations, eliminating the need for manual simulation runs and file conversion. Reduced cycle time by 75%.
- Built Python LAN searching tool to convert file paths to easily navigable Excel spreadsheets, assisting the technical team in efficiently locating important documents.

Data Scientist – Machine Augmented Interpretation June 2021 – July 2023

- Developed and programmed internal Python package for trend-fitting and anomaly detection with seismic data. Collaborated with IT developers to implement code as in-house software plug-in for deployment to Business Units (BUs) for resource exploration and prospecting.
- Designed and implemented machine learning solutions (regression, classification, clustering, deep learning, and semi-supervised learning) in support of Unconventionals, Low Carbon Solutions, and Guyanese BUs. Significantly reduced interpretation time (weeks to days) for BU customers.
- Leveraged MLflow for model life cycle management and tracking and documented all codes in version-controlled GitHub repositories, ensuring successful knowledge transfer and handover upon promotion from team.
- Advised an external research project with Purdue University for using convolutional neural networks to segment patterns and trends in petrophysical data, resulting in multiple publications and conference abstracts.
- Led recruitment efforts at Texas A&M University and assisted greater Upstream Geoscience community in hiring over 30 new employees and 10 summer interns for the 2023 calendar year.

Geoscientist – Stratigraphy Core Group Oct. 2020 – June 2021

- Stewarded the use of ArcGIS StoryMaps for knowledge capture and documentation across the Upstream organization. Collaborated with BU interpreters and subject matter experts to convert their expertise into user-friendly, web-based applications, ultimately gaining over 5000+ internal pageviews.

Geoscience Intern – Process Stratigraphy May 2019 – Aug. 2019

- Evaluated the limitations and applications of stratigraphic forward modeling software, GPM (SLB) and EMstrata (ExxonMobil), to influence Research & Development decision to sponsor joint industry program with external vendor.

TECHNICAL SKILLS

Petrel, RokDoc, Geoteric, Paleoscan, Python, Scikit-learn, PyTorch, TensorFlow, Keras, MLflow, Git, Microsoft Office, Adobe Suite, ArcGIS, SQL (Basic), Linux (Basic), VBA (Basic)

CONFERENCE ABSTRACTS & PRESENTATIONS

Vento, N., Liu, E., and Johns, M., 2023, A deep learning workflow for petro-mechanical facies predictions in unconventionals, International Meeting for Applied Geoscience & Energy 2023.

Powers, H. and Vento, N., 2023, Spatially varying Chi volumes: A study in offshore Australia on background trend calculation from the Shuey two-term approximation, International Meeting for Applied Geoscience & Energy 2023.

EDUCATION

Colorado State University

Master of Science, Geosciences (GPA: 4.0 / 4.0) Aug. 2018 – May 2020

Thesis: "Hypothesis-based Machine Learning for Deep-water Channel Systems"

Texas A&M University

Bachelor of Science, Geology (GPA: 3.73 / 4.0) Aug. 2014 – May 2018