

M U L I N N U H A A B D U H

mulinuhaa@gmail.com | +62 813-8399-1971 | Surabaya, Indonesia | mulinuhaabduh.vercell.app | linkedin.com/in/mulinnuhaabduh

SUMMARY

Geophysical Engineering student at Institut Teknologi Sepuluh Nopember with 2+ years of hands-on experience in machine learning, scientific computing, and software development. Built end-to-end deep learning pipelines (CNN/LSTM) that improved signal-to-noise ratio by 58.8% and ran 3x faster, and gradient-boosting models (LightGBM) achieving up to 6.5x better accuracy than baselines, with results published in a Q1 journal. Skilled in Python, PyTorch, and full-stack scientific tooling, with proven leadership as a teaching assistant for 80+ students and a hackathon champion in ML for geoscience.

ACADEMIC

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Bachelor's, Geophysical Engineering

GPA: 3.42

Surabaya

2022 – 2026

PROFESSIONAL EXPERIENCE

PETROPHYSICS LABORATORY, GEOPHYSICAL ENGINEERING ITS

Desktop Software Engineer (LithoQuant)

Surabaya

Dec 2024 – Dec 2025

- Built a PyQt5 desktop app for petrophysical well-log analysis (oil & gas), structured into 9 modular components.
- Implemented calculation engines: Volume Shale, Porosity, Water Saturation, Permeability, Net Res/Pay, and Pickett Plot.
- Engineered a QC & editing toolkit (smoothing, despiking, interpolation, outlier detection) with real-time multi-well Matplotlib visualization.
- Added LAS parsing (Lasio/Pandas), multi-format export (LAS, ASCII, Excel, CSV), and a scientific calculator with session recovery.

GEOPHYSICAL ENGINEERING ITS

Teaching Assistant

Surabaya

Nov 2023 – Dec 2025

- Machine Learning (Capita Selecta 1): Taught ML principles to 110+ students across two cohorts (2024 & 2025). Designed lab exercises and assessments integrating ML with geophysical data, while supporting department research.
- Geophysical Computation: Instructed 170+ students in Python/MATLAB programming applied to geophysics across two terms (2023 & 2024). Developed interactive course materials and collaborated with faculty.

ROCK FLOW DYNAMICS

Seismic Interpreter

South Jakarta

Jan 2025 – Mar 2025

- Interpreted the Kupe South field (New Zealand) in tNavigator for reservoir characterization.
- Performed log calculation/transformation, well-seismic tie, horizon & fault picking, and seismic attributes.
- Built a Streamlit dashboard to present results and automate new-well processing.

PUBLICATIONS

- Widya Utama, Maman Hermana, Dwa D Warnana, Wien Lestari, Muhammad NA Zakariah, Sherly A Garini, Rista F Indriani, Dhea P Novian Putra, M Ulin Nuha Abduh, Alif NF Insani, Dandi Syahtia Pratama, Khairul Arifin Mohd Noh, Abdul Halim Abdul Latiff. *Enhancing Magnetotelluric Data Quality Using Deep Learning-Based Denoising Models: A Study of CNN and LSTM*. Journal of Human, Earth, and Future, 2025 — <https://hefjournal.org/index.php/HEF/article/view/442>
- Sherly Ardhya Garini, Ary Mazharuddin Shiddiqi, Widya Utama, M Ulin Nuha Abduh. *Reconstructing Missing Well-Log Data with LightGBM and BiRNN in Oil Fields*. 2025 International Conference on Smart Computing, IoT and Machine Learning (SIML), 2025 — <https://ieeexplore.ieee.org/document/11081019>

HONORS & AWARDS

- Hackathon Champion - Machine Learning in Geoscience HAGI & Microsoft Indonesia (2024)
- Second Place in Scientific Paper Competition - Geopoint IMG-ITB (2024)

LANGUAGES

Indonesian (Native), English (Professional), Javanese (Native)