

José María García Márquez

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LinkedIn | GitHub | Portfolio

Geophysical Engineering Profile

Geophysical engineer with expertise in seismic noise data processing, GPR data analysis (over 6 km), Vertical Electrical Sounding (VES), and geological modeling. Strong background in Python programming, geophysical software, and data inversion using simPEG (TEM), PyGIMLi (VES), and ResIPy (resistivity). Experienced in mining, archaeological research, and groundwater assessment.

Education

- **FIUNAM, CDMX** 08/2017 – 06/2023
Bachelor in Geophysical Engineering
- **PioPetro Summer Internship** – Accepted for Oil and Gas Lectures 06/2024 – 08/2024
Lectures on Well Intervention, Machine Learning, and Hydraulic Fracturing.

Professional Experience

- **GRUP TERRA** – Geophysical Engineer 10/2024 – Present
 - Authored technical reports and conducted detailed geophysical data analysis.
 - Led field campaigns, ensuring accurate data collection and interpretation.
 - Collaborated with multidisciplinary teams for integrated geological studies.
- **Open Science Labs** – Software Developer Intern 11/2023 – 12/2023
 - Developed *fqlearn*, a Python library for thermodynamic calculations.
 - Improved computational efficiency by 20
- **DIAS Geophysical** – Field Engineer Intern 06/2023
 - Performed Induced Polarization surveys for mineral exploration.
 - Applied simPEG algorithms, improving subsurface imaging accuracy.
 - Processed seismic refraction data to enhance geological interpretation.

Skills

- **Languages:** Spanish (native), English (proficient), Chinese (beginner).
- **Programming:** Python, R, MATLAB, Fortran, C++.
- **Software:** LibreCAD, AutoCAD, GPRPy, RESiPy, ObsPy, PyGIMLi, simPEG, QGIS, Excel, LeapFrog Energy.
- **Tools:** Docker, matplotlib.
- **Fieldwork:** Geophysical equipment operation, geological interpretation, seismic refraction data processing.

Certifications

- **Certified Contributor to *fqlearn* Project** 12/2023

Projects

- **pypoza:** Python library for well log data visualization and statistical analysis.
- **hvsrlearn:** HVSr analysis tool with GUI for seismic noise interpretation.
- **vespy:** Tool for processing vertical electrical sounding data.
- **gridder:** ADMT data visualization tool for streamlined interpretation.

Publications

- **Exploring *fqlearn*: Empowering Thermodynamic Processes** (Open Science Labs).