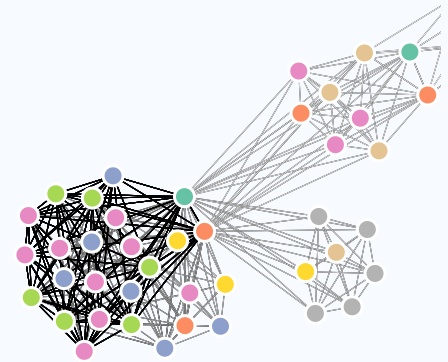


# MARCELO ALBUQUERQUE

I am a petrophysicist with a unique combination of skills in applied machine learning, statistics and reservoir engineering. I am passionate about analyzing and extracting value from data, using exploration and visualization tools and deploying solutions for business problems.

Currently searching for a position that allows me to build tools leveraging a combination of visualization, machine learning, and software engineering to help people explore and understand their data in new and useful ways.



## EDUCATION

- 2020  
|  
2018
- **MsC, Computer Science**  
UFRJ 📍 Rio de Janeiro, RJ
    - Master Thesis: Prediction of Petrophysical Properties Using Machine Learning and Hierarchical Multi-Task Linear Models
- 2008  
|  
2003
- **B.S., Electronics Engineering**  
ITA 📍 Sao Jose dos Campos, SP
    - Diploma Thesis: Applications of Time-Domain Back-Projection SAR Processing in the Airborne Case

View this CV online with links at  
[mralbu.github.io/cv](https://mralbu.github.io/cv)

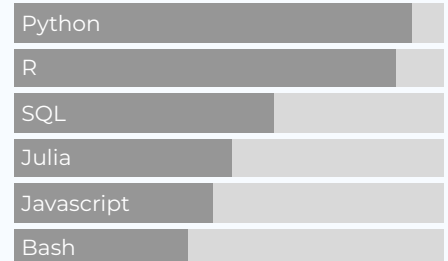
## CONTACT

✉ [marceloralbuquerque@gmail.com](mailto:marceloralbuquerque@gmail.com)  
🐙 [github.com/mralbu](https://github.com/mralbu)  
🌐 [mralbu.github.io](https://mralbu.github.io)  
in [linkedin.com/in/mralbu](https://linkedin.com/in/mralbu)

## INDUSTRY EXPERIENCE

- Present  
|  
2018
- **Data Scientist**  
Petrobras Research Center 📍 Rio de Janeiro, RJ
    - Develop Machine Learning models to predict Petrophysical Properties
    - Build REST APIs and python/R packages to access and explore petrophysical data
    - Enhance data storage and image processing workflows for microtomographic images
    - Design petrophysical data visualization tools and web apps
    - Develop reservoir simulation python packages to deploy and update petrophysical models using history matching bayesian methods
- Present  
|  
2015
- **Petrophysicist**  
Petrobras Research Center 📍 Rio de Janeiro, RJ
    - Coordinate the execution of Routine and Special Core Analysis (SCAL) data gathering for pre-salt and other strategic fields of Petrobras
    - Analyze SCAL experimental data and provide meaningful petrophysical rock parameters for reservoir simulation
    - Simulate and research physical phenomena and improve data acquisition methods

## LANGUAGE SKILLS



Made with the R package  
[pagedown](https://github.com/josiahpage/pagedown).

Last updated on 2025-06-16.

- 2015  
|  
2010

●

**Reservoir Engineer**

Petrobras

📍 Aracaju, SE

- Reservoir Engineer at the Sergipe-Alagoas Business unit (UO-SEAL)
  - Management of mature oil and gas fields in the Sergipe Alagoas basin
  - Oil Field Production and Reserves forecasting with analytical and numerical simulation tools (CMG Software Suite)
- 2010  
|  
2009

●

**Petroleum Engineer**

Petrobras

📍 Salvador, BA

- Petroleum Engineering in-company specialization at Petrobras University
- 2008  
|  
2008

●

**Engineering Intern**

Orbisat

📍 Sao Jose dos Campos, SP

- Developed a point-target simulator for a ground-based weather radar, using Synthetic Aperture Radar concepts
  - Supported the software development team evaluating and implementing radar signal processing algorithms in IDL



## RESEARCH EXPERIENCE

- 2007  
|  
2007

●

**Diplomand Researcher**

Deutsches Zentrum für Luft und Raumfahrt (DLR)

📍 Munich, DE

- Implemented a Synthetic Aperture Radar (SAR) processor in IDL and C / pthreads
  - Investigated and developed applications of time-domain SAR processing: direct-geocoding and processing of curvilinear acquisition trajectories
  - Researched a novel SAR acquisition geometry called Circular SAR



## PUBLICATIONS

- 2024  
|  
2024

●

**Relative Permeability Modeling of Heterogeneous Carbonate Rocks from Laboratory to Field Scale Simulation: a Presalt Field Case**

Rio Oil & Gas

- Authors: Jose Sergio de Araujo Cavalcante Filho, Israel Bruno da Silva Orrico, Marcelo Ramalho Albuquerque, Claudio Roisenberg, Christian Hendra Sunarto
- 2018  
|  
2018

●

**Estimation of Capillary Pressure Curves from Centrifuge Measurements Using Inverse Methods**

Rio Oil & Gas

- Authored with Felipe M. Eler, Heitor V.R. Carmargo, Andre L.M. Compan, Dario A. Cruz and Carlos E. Pedreira.

2008  
|  
2008

● **Applications of Time-Domain Back-Projection SAR Processing in the Airborne Case**

European Conference on Synthetic Aperture Radar

- Authored with Pau Prats and Rolf Scheiber



## AWARDS AND ACHIEVEMENTS

2024  
|  
2024

● **Plinio Cantanhede Award**

Rio Oil & Gas

- Award given for the best paper in the 2024 Rio Oil & Gas Conference in the Upstream Section

2024  
|  
2024

● **Hackathon Semana Petrobras de Dados e Analytics**

Petrobras

- First place in a competition where teams from Petrobras had to train semantic segmentation models to identify turbidite channels in 3D seismic cubes