

Consultant / Trainer

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The **Petrogenium** (in collaboration with EPTS) **Introduction to Machine learning (ML) for Geophysics** will provide participants with a solid understanding of how Machine Learning is transforming geoscience analysis. They will learn the essential principles behind algorithms used in Artificial Intelligence, moving beyond the perception that these tools operate as mysterious “black boxes.” The course explains how data-driven methods can uncover hidden relationships between geological observations and outcomes, especially in complex areas such as carbonate reservoir interpretation where traditional physics-based equations fall short.



Participants

This **Petrogenium**. course aims at All those interested in understanding the impact Machine Learning will have on the Geosciences and then specifically the impact on geophysical processing and interpretation. Hence, geologists, geophysicists and petroleum and reservoir engineers, involved in exploration and development of hydrocarbon fields, but also those working in shallow-surface geophysics.



Learning Objectives

At the end of the course participants will have an idea how Machine learning, being part of Artificial Intelligence will impact the future of Geosciences. This will be evident from the few examples shown in processing and (quantitative) interpretation. The course uses a mixture of lectures, practical exercises and direct (workshop-like) participant involvement in discussions.

Programme

1 DAY TRAINING

1. Welcome, Program, Biography
2. Intro ML
3. ML Tutorial
4. ML Open Source Software
5. Weka
 - Exercises 1-2
6. DNN
7. ML First Arrival Picking
8. ML Trace Interpolation
 - Exercises 3-5
9. Activation Functions
10. Forward and Backward Propagation
 - Videos: Geophysical Inversion versus ML, Deeplizard
 - Exercises: 6-8
11. ML Fluid Substitution
 - Exercises 9-11
12. Future of ML in Geophysics

Why select Petrogenium.?

The above support will be provided by principal consultants with 30+ years world-class experience in the technology and hands-on know-how from operation of refinery units.

Contact Petrogenium.:

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Because Experience Matters