



## Introduction to Subsurface Machine Learning - ISML

### COURSE

#### About the Course

Looking to understand machine learning and how it can be applied to subsurface analytics workflows?

This course is a foundational introduction to the landscape of subsurface-focused machine learning. Topics and techniques covered include outlier detection, data debiasing and imputation, feature engineering, anomaly detection, supervised and unsupervised learning, spatiotemporal modeling, and uncertainty modeling.

#### Target Audience

Subject Matter Experts with programming experience in Python

#### You Will Learn

Advanced understanding of geostatistics & machine learning models with subsurface workflows in Scikit-learn & TensorFlow on petroleum data sets.

#### Course Content

- Probability
- Data Analytics
- Feature Selection
- Feature Engineering
- Machine Learning
- Clustering
- Advanced Clustering
- Dimensionality Reduction
- Multidimensional Scaling
- Naïve Bayes
- k-Nearest Neighbors
- Decision Tree
- Ensemble Tree
- Support Vector Machines
- Neural Networks
- SHAP

## Product Details

Categories: [Upstream](#)

Disciplines: [Data Management](#), [Science and Analytics](#)

Levels: [Basic](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [John Foster](#) [Michael Pyrcz](#)