



GeoNeurale

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-Postdoctoral and doctorand training for Geoscientists and Engineers
-Industry postdoctoral and cross-disciplinary training

Module 9.

Machine Learning Applications for Geoscientists and Engineers

Linear single variable Regression
Linear multiple Variables Regression
Hypotheses
Cost Function
Gradient Descent Optimization Algorithms
Linear Algebra concepts and software Matrices operations
Vectorization
Classification with Logistic Regression
Linear and Non-Linear Decision Boundaries
Multiclass Classification
Non-Linear Hypotheses
Neural Networks
Forward and Backpropagation algorithms
Optimization
Training, Testing, Cross-Validation
Support Vector Machines
SVM Decision Boundary
Kernels
Clustering
Supervised and Unsupervised learning methods
PCA
Anomaly detection
Large scale Machine Learning
Applications for Exploration Geosciences
Applications in Data Logging and Drilling Mechanics