Best Technology Solutions (BTS)

Introduction to Artificial Intelligence Concept, Methodologies, and Applications in Oil & Gas Production Analysis and Optimization

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Introduction:

This course is presenting an overview on artificial intelligence, the most common algorithms in machine learning, and different applications in oil and gas industry.
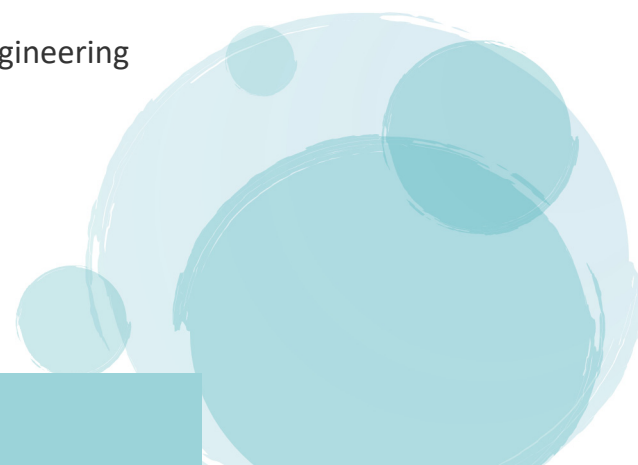
Course Outline:

DAY 1: Introduction to artificial intelligence

- What is artificial intelligence?
- Different applications of artificial intelligence.
- Why we need artificial intelligence in the petroleum industry.

DAY 2: Types of machine learning

- Different types of machine learning.
- The most common machine learning algorithms.
- Artificial neural network (ANN).

DAY 3: Applications of machine learning in the upstream industry

- Digital oilfield implementations
- History of machine learning in oil fields
- Applications in geosciences, reservoir, and drilling engineering

DAY 4: Application of machine learning in oil & gas production

- Production Engineering Overview
- Production Optimization
- Predicting Well Rate Potential
- The most common applications in production engineering

DAY 5: Implementation of machine learning different algorithms

- Different programming languages.
- Data Preprocessing
- Python Programming.
- Installation and getting started with python