



London TDM

# **Artificial Intelligence and Data Science Training Courses**

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 29 March 2026 To 02 April 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

Machine Learning Fundamentals is a comprehensive 5-day course designed for professionals seeking to gain a foundational understanding of machine learning concepts and techniques. Participants will engage with core algorithms and practical applications, empowering them with the skills needed to implement machine learning solutions in real-world scenarios.

## Objectives

- Understand the core concepts and definitions of machine learning.
- Familiarize with various types of machine learning algorithms.
- Learn to preprocess and visualize datasets effectively.
- Gain hands-on experience with popular machine learning tools and libraries.
- Apply machine learning techniques to solve real-world problems.

## Course Outlines

### Day 1: Introduction to Machine Learning

- Overview of Machine Learning and its applications
- Key definitions and terminology
- Supervised vs Unsupervised Learning
- History and evolution of Machine Learning
- Challenges and future trends

### Day 2: Data Preprocessing and Visualization

- Understanding datasets and feature selection
- Data cleaning and handling missing values
- Normalization and standardization
- Exploratory Data Analysis (EDA) techniques
- Visualization tools and libraries

### Day 3: Supervised Learning Techniques

- Linear Regression and its applications
- Classification algorithms: Logistic Regression, Decision Trees
- Model evaluation metrics and techniques
- Overfitting and underfitting concepts
- Hands-on with popular supervised learning libraries

### Day 4: Unsupervised Learning Techniques

- Clustering algorithms: K-means, Hierarchical Clustering
- Dimensionality Reduction techniques: PCA
- Anomaly detection methods
- Applications and limitations of unsupervised learning
- Practical exercises with unsupervised learning tools

## **Day 5: Practical Applications and Advanced Topics**

- Introduction to Neural Networks and Deep Learning
- Reinforcement Learning basics
- Case studies on machine learning applications
- Deployment and productionization of models
- Future scope and career paths in Machine Learning