



London TDM

# Artificial Intelligence and Data Science Training Courses

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

**Course Date:** From 12 April 2026 To 16 April 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

This 5-day professional course, "Applied Data Science with Python," is designed to equip participants with practical data science skills using the Python programming language. Throughout the course, attendees will engage in hands-on sessions that cover essential data science processes, tools, and techniques. By the end of the course, participants will be able to confidently apply data science principles to solve real-world problems.

## Objectives

- Understand the core concepts and methodologies of data science.
- Gain proficiency in using Python for data analysis and visualization.
- Learn to handle and preprocess data for analysis.
- Develop the ability to apply machine learning algorithms to data-driven decision making.
- Enhance skills in communicating data insights effectively.

## Course Outlines

### Day 1: Introduction to Data Science and Python

- Overview of Data Science and its Applications
- Installing Python and Setting up the Environment
- Introduction to Jupyter Notebooks and Anaconda
- Basic Python Programming Concepts
- Data Types, Variables, and Basic Operations

### Day 2: Data Analysis and Manipulation

- Introduction to Libraries: NumPy and Pandas
- Data Structures in Pandas: Series and DataFrames
- Data Manipulation Techniques with Pandas
- Data Cleaning and Preprocessing Strategies
- Exploratory Data Analysis (EDA) Techniques

### Day 3: Data Visualization

- Importance of Data Visualization
- Visualization Libraries: Matplotlib and Seaborn
- Creating Line, Bar, and Scatter Plots
- Advanced Visualization Techniques
- Customizing and Styling Visualizations

### Day 4: Introduction to Machine Learning

- Understanding Machine Learning Concepts and Workflow
- Overview of Supervised vs. Unsupervised Learning
- Implementing Regression Algorithms with Scikit-learn
- Classification Algorithms and Use Cases
- Model Evaluation and Performance Metrics

## **Day 5: Advanced Topics and Project Presentation**

- Introduction to Natural Language Processing (NLP)
- Time Series Analysis and Forecasting
- Introduction to Deep Learning Concepts
- Capstone Project: End-to-End Data Science Project
- Project Presentation and Feedback Session