



London TDM

# Artificial Intelligence and Data Science Training Courses

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

**Course Date:** From 01 March 2026 To 05 March 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

Predictive analytics and forecasting models are essential tools in today's data-driven decision-making landscape. This course will equip participants with the techniques and technologies necessary to harness historical data and make informed forecasts that drive strategic initiatives. Through a blend of theoretical insights and practical applications, participants will gain the skills needed to construct accurate predictive models and implement robust forecasting strategies.

- Understand the fundamentals of predictive analytics and forecasting.
- Explore various statistical and machine learning models used for prediction.
- Develop skills to prepare and process data for predictive modeling.
- Implement predictive models using popular software tools and frameworks.
- Evaluate and improve the accuracy of forecasting models.

## Course Outlines

### Day 1: Introduction to Predictive Analytics

- Overview of predictive analytics and its business applications
- Key concepts and terminologies
- Data types and data sources in predictive modeling
- Introduction to data preprocessing and cleaning
- Hands-on session: Setting up a predictive analytics environment

### Day 2: Statistical Models and Techniques

- Exploratory data analysis (EDA) techniques
- Linear and logistic regression models
- Time series analysis fundamentals
- Introduction to ARIMA models
- Hands-on session: Building simple regression models

### Day 3: Machine Learning for Prediction

- Introduction to supervised learning techniques
- Decision trees and random forests for prediction
- Support vector machines and neural networks
- Model evaluation and validation techniques
- Hands-on session: Implementing machine learning algorithms

### Day 4: Advanced Forecasting Models

- Advanced time series forecasting methods
- Autoregressive models and their extensions
- Understanding seasonality and trends
- Integration of external factors in forecasting models
- Hands-on session: Advanced forecasting model development

### Day 5: Implementing and Operationalizing Models

- Integrating predictive models into business processes
- Monitoring and maintaining predictive models
- Case studies of successful implementations
- Scaling predictive models and managing large datasets
- Hands-on session: Deploying predictive models in a cloud environment