

Comprehensive Machine Learning: From Fundamentals to AI

IT & IT Engineering
Sharm El-Sheikh (Egypt)
13 - 17 Jul 2025

UK Traininig

PARTNER



Comprehensive Machine Learning: From Fundamentals to AI

Ref: 321786_146767 **Date:** 13 - 17 Jul 2025 **Location:** Sharm El-Sheikh (Egypt) **Fees:** 3700 Euro

Course Description

This intensive 5-day course provides a comprehensive introduction to machine learning, covering fundamental concepts, popular algorithms, and practical applications. Participants will gain hands-on experience with Python-based tools and frameworks, learning to build, evaluate, and deploy machine learning models for real-world problems.

Learning Objectives

- Understand core machine learning concepts and algorithms
- Gain proficiency in using Python for data analysis and model development
- Learn to build and evaluate supervised and unsupervised learning models
- Explore neural networks and deep learning techniques
- Develop skills to implement end-to-end machine learning projects

Course Modules

Day 1: Introduction to Machine Learning and Python

- Overview of machine learning and its applications
- Python fundamentals for data science
- Data preprocessing and exploratory data analysis
- Introduction to scikit-learn library

Day 2: Supervised Learning - Classification and Regression

- Linear and logistic regression
- Decision trees and random forests
- Support Vector Machines SVM
- Model evaluation and validation techniques

Day 3: Unsupervised Learning and Dimensionality Reduction

- Clustering algorithms K-means, hierarchical clustering
- Principal Component Analysis PCA
- Feature selection and engineering
- Anomaly detection techniques

Day 4: Neural Networks and Deep Learning

A graphic of a chessboard with several chess pieces, including a king and pawns, arranged on it. The text 'UK Training PARTNER' is overlaid on the image.

UK Training
PARTNER

- Artificial Neural Networks ANN fundamentals
- Deep learning architectures
- Convolutional Neural Networks CNN for image processing
- Recurrent Neural Networks RNN for sequence data

Day 5: Advanced Topics and Project Implementation

- Ensemble methods and boosting algorithms
- Natural Language Processing NLP basics
- Introduction to reinforcement learning
- End-to-end machine learning project implementation

Practical Wins for Participants

- Build a predictive model for customer churn analysis
- Develop an image classification system using deep learning
- Create a recommendation engine using collaborative filtering
- Implement a sentiment analysis tool for social media data

A graphic of a chessboard with several chess pieces. A large gold king piece is prominent in the foreground, with a silver pawn and a silver knight behind it. The board is checkered, and there are concentric circles in the background.

UK Training
PARTNER

Blackbird training cities



Amman (Jordan)



Amsterdam (Netherlands)

Accra (Ghana)

Annecy (France)

Baku (Azerbaijan)

Bali (Indonesia)

Bangkok (Thailand)

Bangkok (Thailand)

Barcelona (Spain)

Batumi (Georgia)

Beijing (China)

Beirut (Lebanon)

Berlin (Germany)

Birmingham (UK)

Bordeaux (France)

Boston, Massachusetts (USA)

Brussels (Belgium)

Cairo (Egypt)

Cape Town (South Africa)

Casablanca (Morocco)

Cascais (Portugal)

Copenhagen (Denmark)

Doha (Qatar)

Dubai (UAE)

Düsseldorf (Germany)

UK Training
PARTNER

Blackbird Training Category



Human Resource



Audit & Quality Assurance



Finance, Accounting, Budgeting



Marketing, Sales, Customer Service



Secretary & Admin



Law and Contract Management



Project Management



IT & IT Engineering



Supply Chain & Logistics



Management & Leadership



Professional Skills



Oil & Gas Engineering



Health & Safety



Telecom Engineering



Hospital Management



Customs & Safety



Aviation



C-Suite Training



Agile and Refinement



Blackbird training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior
Kingdom of Saudi Arabia
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for

UK Training
PARTNER



LONDON TRAINING PROVIDER



www.blackbird-training.com



training@blackbird-training.com



+44 7480 775526 / +44 7401 177335