QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1196

Deep Learning Fundamentals Training Course

MACHINE LEARNING & COMPUTER VISION
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION
5 Days

DELIVERY
Classroom

LOCATION
London, United Kingdom

DATES
19 – 23 Oct 2026

Scheduled Event Details

CITY	London, United Kingdom
DATE	19 – 23 Oct 2026
DELIVERY TYPE	Classroom
COURSE FEE	€5,800

Course Overview

The Deep Learning Fundamentals Training Course is a comprehensive professional development program designed to equip executives, managers, AI specialists, machine learning engineers, data scientists, software engineers, and technical professionals with the knowledge and practical skills required to understand, develop, and implement deep learning solutions in modern organizations. Deep learning has become one of the most transformative technologies driving Artificial Intelligence, enabling organizations to solve highly complex problems involving image recognition, natural language processing, predictive analytics, intelligent automation, recommendation systems, and autonomous decision-making. This course provides a strong foundation in deep learning concepts while emphasizing practical business applications across multiple industries.

Government entities, ministries, public sector organizations, banks and financial institutions, oil and gas companies, manufacturing organizations, healthcare providers, telecommunications companies, transportation authorities, logistics providers, educational institutions, and multinational corporations increasingly leverage deep learning to automate operations, improve customer experiences, strengthen cybersecurity, enhance predictive maintenance, optimize asset management, detect fraud, analyze large volumes of structured and unstructured data, and accelerate digital transformation initiatives. Organizations that successfully implement deep learning technologies gain significant advantages in operational efficiency, innovation, and data-driven decision-making.

This course covers the complete deep learning lifecycle, beginning with the foundations of Artificial Intelligence, machine learning, and neural networks before progressing to deep neural network architectures, data preparation, feature engineering, model training, optimization, hyperparameter tuning, evaluation techniques, deployment, monitoring, and continuous improvement. Participants will explore Artificial Neural Networks (ANNs), Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), transformer concepts, attention mechanisms, transfer learning, explainable AI, MLOps fundamentals, responsible AI, governance, cybersecurity, privacy, regulatory compliance, and enterprise implementation best practices. Practical exercises and real-world case

studies demonstrate how deep learning technologies solve complex organizational challenges across multiple sectors.

The Deep Learning Fundamentals Training Course combines expert instruction, interactive workshops, hands-on laboratories, enterprise case studies, and internationally recognized best practices to help participants confidently develop and deploy deep learning solutions. By the end of the course, participants will be able to identify high-value deep learning opportunities, design intelligent AI systems, improve predictive performance, integrate deep learning models into enterprise environments, and support sustainable innovation and digital transformation strategies.

Objectives

- Analyze the principles, architectures, and enterprise applications of deep learning.
- Develop practical skills for designing, training, and optimizing deep learning models.
- Evaluate business opportunities suitable for deep learning implementation.
- Apply neural network architectures to solve complex organizational challenges.
- Design AI-powered solutions that improve operational efficiency and business performance.
- Improve model accuracy through optimization, validation, and hyperparameter tuning techniques.
- Strengthen understanding of explainable AI, responsible AI, governance, cybersecurity, privacy, and regulatory compliance.
- Implement best practices for deploying, monitoring, and maintaining enterprise deep learning models.
- Assess technical, operational, ethical, and security risks associated with deep learning applications.
- Align deep learning initiatives with organizational strategy, innovation, and digital transformation objectives.

Who Should Attend

This course is designed for executives, digital transformation leaders, AI specialists, machine learning engineers, deep learning practitioners, data scientists, software developers, IT managers, solution architects, innovation managers, project managers, business analysts, data engineers, consultants, researchers, and decision-makers responsible for Artificial Intelligence implementation and enterprise analytics.

The program is equally valuable for professionals working in government entities, ministries, public sector organizations, banks and financial institutions, oil and gas organizations, manufacturing companies, healthcare providers, educational institutions, telecommunications companies, logistics providers, consulting firms, and multinational corporations seeking to leverage deep learning technologies to improve operational performance, automate complex processes, and accelerate business innovation.

Professionals responsible for predictive analytics, intelligent automation, computer vision, natural language processing, cybersecurity, fraud detection, predictive maintenance, enterprise analytics, governance, compliance, research and development, and AI innovation will benefit from the practical methodologies and implementation frameworks presented throughout the course.

Learning Outcomes

- By the end of this course, participants will be able to:
- Explain the principles, architectures, and learning mechanisms of deep learning.
- Prepare datasets for deep learning model development.
- Design and train deep neural networks for predictive and analytical applications.
- Apply Convolutional Neural Networks, Recurrent Neural Networks, and transformer concepts to enterprise AI solutions.
- Evaluate deep learning model performance using industry-standard validation techniques.
- Optimize deep learning models through hyperparameter tuning and performance improvement methods.
- Apply explainable AI and responsible AI principles while ensuring governance, cybersecurity, privacy, and regulatory compliance.
- Deploy deep learning models into enterprise environments using recognized best practices.
- Identify strategic opportunities for applying deep learning across multiple business functions.
- Develop implementation roadmaps for scalable enterprise deep learning adoption.

Course Outline

DAY 01

Foundations of Deep Learning

- Introduction to Artificial Intelligence, Machine Learning, and Deep Learning
- Evolution of neural networks and deep learning
- Deep learning lifecycle
- Business applications across industries

PRACTICAL

Practical workshop on identifying enterprise deep learning opportunities

DAY 02

Neural Networks and Model Development

- Data preparation and feature engineering
- Artificial Neural Networks (ANNs)
- Deep neural network architectures
- Model training and optimization

PRACTICAL EXERCISE

Practical exercise on building predictive deep learning models

DAY 03

Advanced Deep Learning Architectures

- Convolutional Neural Networks (CNNs)
- Recurrent Neural Networks (RNNs)
- Attention mechanisms and transformer concepts
- Transfer learning and modern deep learning techniques

WORKSHOP ON DEVELOPING ADVANCED ENTERPRISE AI SOLUTIONS

DAY 04

Enterprise Deep Learning Implementation

- Model deployment and MLOps fundamentals
- Model monitoring and continuous improvement
- Explainable AI, responsible AI, governance, cybersecurity, privacy, and regulatory compliance
- Measuring business performance and operational value

PRACTICAL

Practical workshop on integrating deep learning models into enterprise systems

DAY 05

Building an Enterprise Deep Learning Strategy

- Future trends in deep learning and Artificial Intelligence
- Scaling enterprise AI capabilities
- International best practices for enterprise implementation
- Organizational change management and continuous innovation

FINAL WORKSHOP

Final workshop involving the development of a comprehensive enterprise deep learning strategy integrating neural networks, CNNs, RNNs, transformer concepts, transfer learning, model optimization, explainable AI, responsible AI, MLOps, governance, cybersecurity, privacy, regulatory compliance, performance measurement, organizational readiness, risk management, and continuous improvement to maximize operational excellence, digital transformation, innovation, and sustainable business success.

Register or Request More Information

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