

Deep Learning for Image Classification and Object Detection

COURSE OVERVIEW

This course provides a comprehensive introduction to deep learning techniques for image classification and object detection, two of the most impactful applications of computer vision. Participants will explore fundamental concepts of convolutional neural networks (CNNs), transfer learning, and state of the art architectures such as ResNet, YOLO, and Faster R-CNN. Through a blend of theory and hands-on practice, participants will gain practical skills in building, training, and deploying models capable of identifying, classifying, and detecting objects in real world images across diverse domains.

WHO SHOULD ATTEND?

This course is designed for data scientists, machine learning engineers, software developers, and researchers who want to specialize in computer vision applications. It is also suitable for professionals in industries such as healthcare, security, manufacturing, agriculture, and autonomous systems, where image-based analysis and object detection play a critical role. A basic understanding of Python and machine learning concepts is recommended.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the principles of CNNs and their role in image recognition tasks.
- Apply transfer learning and fine-tuning to improve model performance.
- Implement popular image classification and object detection algorithms.
- Evaluate and optimize models using performance metrics and real-world datasets.
- Deploy deep learning models for practical applications in various industries.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Focus on industry applications, challenges, and emerging trends in computer vision.
- Blended approach combining theory, coding exercises, and case studies.
- Practical demonstrations of transfer learning and model deployment.
- Step-by-step guidance on CNNs, ResNet, YOLO, and Faster R-CNN.
- Hands-on projects using real-world image datasets.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded