

Advanced Topics in Vision: GANs and Style Transfer

COURSE OVERVIEW

This course covers advanced computer vision techniques using Generative Adversarial Networks (GANs) and neural style transfer. Participants will learn GAN architecture, training methods, and image generation. The course also teaches how to apply style transfer to transform images with artistic effects. Through hands-on projects, participants will build and apply advanced vision models for real-world and creative AI applications.

WHO SHOULD ATTEND?

This course is tailored for AI and machine learning professionals, computer vision engineers, data scientists, researchers, and developers interested in generative models. It is also suited for advanced learners and enthusiasts who have a solid foundation in deep learning and want to explore creative and practical applications of GANs and style transfer in computer vision projects.

COURSE OUTCOMES

Delegates will gain the knowledge and skills to:

- Understand the architecture and working principles of GANs.
- Train and evaluate GANs for image generation tasks.
- Apply neural style transfer techniques to manipulate and transform images.
- Use deep learning frameworks (e.g., TensorFlow or PyTorch) to build vision models.
- Address challenges like mode collapse and training instability in GANs.
- Explore creative applications of GANs in art, design, and content creation.
- Integrate advanced vision techniques into broader AI solutions.
- Gain confidence in experimenting with generative models for real-world use cases.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- A deep dive into Generative Adversarial Networks (GANs) architecture
- Training techniques and loss functions for GANs
- Style transfer fundamentals and implementation
- Image generation, enhancement, and transformation
- How to address GAN training challenges (e.g., mode collapse)
- Hands-on coding with TensorFlow or PyTorch
- Applications in art, design, and AI creativity
- Evaluation metrics for generative models
- Case studies of real-world GAN and style transfer projects

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