

Advanced Topics in Vision: GANs and Style Transfer

COURSE OVERVIEW

This course explores current generative models and their applications in computer vision. Participants will examine the principles behind Generative Adversarial Networks (GANs), delve into advanced architectures such as conditional GANs, CycleGANs, and StyleGANs, and study how these models enable creative applications like image synthesis, super resolution, and artistic style transfer. Through a blend of theoretical foundations, practical coding exercises, and case studies, the course will equip participants with both the conceptual knowledge and hands-on skills required to design, implement and evaluate generative vision systems.

WHO SHOULD ATTEND?

This course is designed for researchers, data scientists, AI practitioners, and advanced machine learning engineers who already have a solid foundation in deep learning and computer vision. It is particularly suited to those seeking to deepen their expertise in generative modeling techniques and apply them to real world challenges in areas such as creative media, design, healthcare imaging, and synthetic data generation.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the theoretical foundations of GANs and style transfer models.
- Implement and train different GAN architectures for diverse vision tasks.
- Apply style transfer techniques for artistic and practical applications.
- Critically evaluate generative model performance and address challenges such as mode collapse, training instability, and data limitations.
- Design innovative applications of GANs and style transfer in industry and research contexts.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Comprehensive coverage of state-of-the-art GAN architectures and style transfer techniques.
- Exploration of ethical considerations and challenges in generative modeling.
- Capstone project which enables you to build and present a custom generative vision application.
- Hands-on coding labs with real-world datasets and frameworks like TensorFlow and PyTorch.
- Case studies showcasing applications in art, design, entertainment, and synthetic data.

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