Applications

Generative Adversarial Networks (GANs) have gained significant attention since their inception and have been employed in a wide range of applications. Some of the most prominent applications include:

Image Generation: This was one of the initial applications of GANs. They can be trained to generate high-resolution, realistic images from random noise.

Data Augmentation: In domains where data is limited, GANs can be used to augment the dataset by generating new samples, which can be particularly valuable for training more robust machine learning models.

Style Transfer: GANs can modify the style of images, such as converting photos into the style of famous paintings or changing day scenes to night scenes.

Super-Resolution: Super-resolution GANs (SRGANs) can enhance the resolution of images, turning low-res images into high-res counterparts.

Image-to-Image Translation: GANs can be used to translate images from one domain to another, such as turning satellite images into maps or sketches into colored images.

Generating Art: Artists and hobbyists have used GANs to create original pieces of art, both in the form of static images and videos.