



GauGAN

Stroke of Genius: GauGAN Turns Doodles into Stunning, Photorealistic Landscapes

OVERVIEW

Creating photorealistic scenery is a time-consuming task. Thousands of artists and designers rely on realistic backgrounds for a wide range of uses including game development, movie and TV shows, and architectural renderings.

At first glance, GauGAN looks like a basic painting tool with a canvas surrounded by brushes and a color palette. But this powerful application from NVIDIA Research allows you to create photorealistic images with just a few easy strokes. Each color in the palette represents an object class such as a tree, mountain or sky. A generative adversarial network (GAN) has been trained to convert the colors into detailed images using a deep network module called SPADE (spatially adaptive normalization).

KEY POINTS

- Easy-to-use interface for game developers, designers, architects, and other creators to quickly generate novel content.
- Trained on one million images using an NVIDIA DGX-1 with 8 V100 GPUs.
- The model runs real-time on a TITAN RTX using the tensor cores.
- SPADE, a new neural network module, better resolves the mode collapsing problem in GAN training.
- Try it yourself, live, at <https://www.nvidia.com/en-us/research/ai-playground/>
- Share your creations on Instagram with #GauGAN

IMAGES

