How AI changed photography forever in 2022

Image of a photographer in the desert produced with an AI image generator (Image credit: Joseph Foley using Stable Diffusion)

AI image generation is one of the most dramatic developments the creative fields have seen for some time, and 2022 was the year that it truly exploded. In a space of a few months, a new technology seemed to appear out of nowhere and evolve at lightning speed, allowing anyone to create an image of practically anything they want merely by typing a description.

Generative AI has provoked a lot of controversy along the way, and exactly where it will lead us remains in doubt, but it seems inevitable that the impact of AI image generators is going to be felt on photography as well as on digital art and illustration. As we reach the end of a year that saw the technology go from a niche curiosity to an easily accessible tool, we round up the milestones that marked the way and that will make us remember 2022 as the year that AI changed photography.

AI image generation takes a huge leap forward *(Image credit: OpenAI)*

"a shiba inu wearing a beret and black turtleneck"

"a close up of a handpalm with leaves growing from it"

"a teddy bear on a skateboard in times square"

The use of artificial intelligence to create images isn't new. Harold Cohen's AARON has been around since the 1970s. But things have accelerated massively over the past decade with technology like generative adversarial networks (GANs) and Google's DeepDream. This year saw an explosion of a new generation of text-based diffusion models based on massive datasets. They're easier to use, more faithful to the data, and they're capable of turning out stunningly accurate results.

In April, OpenAI launched DALL-E 2. A portmanteau of 'Dali' (as in Salvador) and Pixar's 'WALL-E', it offered a massive upgrade on its predecessor, with more realistic results and four-times higher resolution. Although there was initially a waiting list, within a couple of months a million people had access and the internet was flooded with surreal, phenomenally detailed images of winged astronauts, urban penguins, Muppet fashion shows and Rubik's cubes made from sushi that could easily pass as photographs. People's minds were blown.

AI image generation for all

The latest diffusion models, like Stable Diffusion, can create AI images with incredible detail (Image credit: OpenAI)

A lot of AI image generators are being tested in very closed trials, but in August came a release that would massively expand access to the tech. Stability AI's Stable Diffusion is an open-source tool, with publicly available code and model weights. Anyone with the technical knowhow could run it on a consumer PC with a fairly pedestrian GPU. No more waiting to get access to a cloud-based service.

Developers began using Stable Diffusion for their own apps or plugins, often providing further training to the model. People have also created plugins for Photoshop and GIMP, and the graphic design platform Canva has officially incorporated Stable Diffusion to allow text-to-image generation. Along with expanded access came huge controversy. Stable Diffusion's open policy was criticised for permitting potentially nefarious use, from the copying of artists' styles to creating non-consensual porn or abusive image. But it's impossible to deny Stable Diffusion's contribution to the mainstream expansion of AI imagery.

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