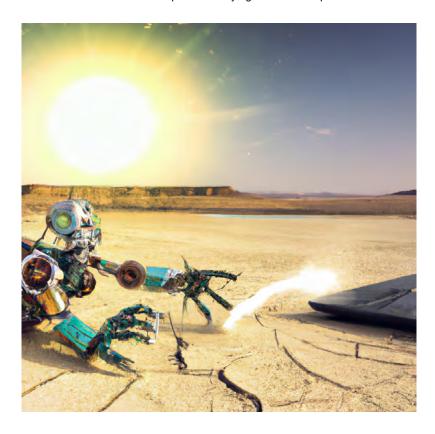## A.I. Begins to Be Useful, but Not Intelligent

The news is featuring artificial intelligence on a daily basis now. I've looked at it. It is useful, right now. I don't agree with the concept of it being intelligent yet. All the art in this month's newsletter was created in either Dall-E or Stable Diffusion. For either of these systems, anyone can try it out, for free. You can specify an artwork style, like a cartoon, a 3D photo render, or an oil painting. Both create square images, four at a time, and they frequently produce at least 3 junk images for everything of some use. Repeating an instruction creates another set of 4 more images, not the same as the first. It's all very random.

For the image above, I told Dall-E, to create " *laptop computer melted off edge of table, in the style of salvador dali.*" I had it create two sets of four images, and the one above was the only one worth using here. The others involved more hot cocoa than melting computers, and some of them were just surreal. But not in the Salvador Dali sense of professional surrealism.

 I asked Dall-E for "r*obot violently destroying a laptop computer in a desert with*

*the sun in the background, as photo-realistic digital art"*. Here's the best result. The worst results had the computer destroying the robot. Oops.



Dall-E lets you edit images it creates. The best part of that is that you can position a rectangle past the edge of the image, and have it generate what should go there. As I found both AI systems tend to cut corners off objects, that seemed useful. So I expanded the robot image above to the left. Surprise–the robot has no legs. Expanded it to the right, and there's another robot. Very odd.



My other experiments were of images that I might find useful in an issue of this newsletter. Sometimes I use traffic signs with changed text, and these start out as a photo of a real sign, plus around 20 minutes of editing. So I tried it: "*road sign with message Caution! Bumpy Updates Ahead! photo realistic outdoors daytim*e"

Everything I tried with text in it, at either AI, messed up the text like this. Actual artificial intelligence would have typed in the sign area. This just mixed up several images. That text doesn't auto-translate as anything at Google Translate–it's just junk. I tried some images of people as well; they mostly came out as horror-movie clowns in crayon, but it's a work in progress.

Here's the robot instruction again, but this image was created by Stable Diffusion. Note that there's no computer in it, and the image picked up a background that looks like an acrylic painting. So the computer took the liberty of using better images in less-specific art.

## Copyrights and Derivative Works

The lawsuits have begun. Getty Images sells stock artwork. They are claiming that Stable Diffusion is a competing source for artwork, and that they have used Getty's IP (intellectual property) to create derivative works. Much of the online clipart and stock photo available for purchase online prohibits derivative works. Of course, if 50 images went into creating one of these images, it will generally not be clear whose artwork was infringed.

More here on the lawsuit:
https://www.thepassivevoice.com/getty-images-sues-stability-ai-for-copyright-infringement/

AI images "are not the product of human authorship" and cannot be issued a copyright, according to the US Copyright Office. Collections of such images, however, can have a compilation copyright. While I'm surprised that there's a statement on this issue so soon, I suspect that the rules will change, because AI is just a bigger power tool for creating images.

Here's the ruling.  (Link is to the US Copyright Office letter)
https://www.copyright.gov/docs/zarya-of-the-dawn.pdf

## Try it Yourself

**Dall-E** is at https://openai.com/product/dall-e-2
Click 'Try DALL-E', and you'll be prompted to create an account. You get 50 free credits to start, 15 more per month for free, and can buy more. The description of what credits buy isn't real clear; it's a measurement of how much computer time is needed to create the image.

**Stable Diffusion** is at https://huggingface.co/spaces/stabilityai/stable-diffusion

There's no required login here, but images may take a little longer to appear, a minute or two. The optional login link is for paid accounts, and the benefits appear on the pricing link.

## Bonus: Make them Bigger!

Dall-E images are 1024 x 1024, in pixels, good enough for newsletters and web pages. That's not good enough for printed art. Stable Diffusion images are 768 x 768. You might want larger images. Here's a web site that uses AI to create larger images without the usual visual issues of the art looking blocky or diagonal lines becoming stair-stepped. It's clearly better than simply rescaling an image.

**BigJPG** is here: https://bigjpg.com/
BigJPG has a similar financial model. There are size limits for free users, and larger size limits and faster processing for paid users. It's worthwhile; I have done logo cleanup and enlargement manually, and spent far too much time on it. These A.I.s are already useful.

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**For computer help, call 410-871-2877**
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