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Eye-Popping AI Apps

Having fun in this third summer of the pandemic can be a real challenge with the high prices, crowds, and general uncertainty. Fortunately, you can get away from it all and safely blow your mind playing online for free with advanced AI text and art generators.

Would you like to **see** “an astronaut riding a horse in space in a photorealistic style”? How about 6 different versions of it then? Or maybe read about it in a **Shakespearean sonnet**? That and almost any other image or textual treatment that you can imagine can now be made from simple phrases in seconds.

Artificial Intelligence (AI) seems like a very dry field of research: highly abstract, with intricate processes, complex decision loops, tiny details and big math, boring jargon, and little at all to do with artistic expression.

But every now and then, a totally unexpected and awesome development pops up. AI has reached one of those places now, one so stunning that a **Google engineer** recently lost his job for **declaring** that **LaMBDA**, its AI chatbot, had reached true sentience, that is, human-like self-consciousness.

This is a **very big claim** with which few experts agree. But a peek at the output of the latest systems could have one wondering if AI is not only already intelligent but **way** more creative than any human being can ever be.

The genie out the bottle

The dream of a machine equipped with **Artificial General Intelligence** (AGI) that thinks, and as broadly and nimbly as we do, is very old. The long, hard slog it has taken to get to this point just shows that our own adaptive smarts are quite an achievement.

The most successful approaches in recent years are based on **neural networks** which mimic how the brain works. These systems are trained on big sets of selected data. Sometimes the nets are told what they are looking at or what the results should be, but basically they are allowed to train themselves.

For instance, they might be shown thousands of pictures of cats in all sorts of poses and situations so that they can figure out what makes a kitty. These will likely be mixed up with images of dogs, horses, and other animals so they can learn to distinguish them.

The point is, the machines do it all on their own: the systems are essentially **black boxes**, opaque to all outside observation. Maybe they know pointy ears and whiskers, or vertical eyes; the only way to tell is see how they do with pictures lacking those details. And occasionally they come up with real surprises.

Just as competition improves skills among humans, so too an **adversarial** contest between AIs sharpens their abilities. While human researchers design the experiments, determine criteria, and compare results, with so much data (basically the entire internet), freedom, and computing power, these new systems are quite capable of astonishing us.

The latest marvels are in the humanities, the fields of art and literature far distant from robotic perception and motion most associated with AI. The research lab dominating text-driven AI at this time is **OpenAI**, whose series of **GPT** systems has been deemed so powerful they have not been fully released.

GPT means “Generative Pre-Training” – using large amounts of text from which it would learn, simply by word counting, which words were most likely to follow others. **GPT-3**, the current version, was trained on large but carefully-scraped portions of the WorldWide Web.

OpenAI has since applied this to the interplay of words and images. **Clip** is a platform to describe images, while **Dall-e** (a play on “**WALL-E**”, the cartoon robot, and the surreal artist, **Salvador Dalí**) goes the other way to make artistic images from textual prompts.

Based on GPT-3, **Dall-e 2**, the latest version, can do incredible things. From a simple description, it can create images, edit them realistically, make variations, change the style and even mash up completely unrelated objects, such as an avocado and a chair.

Seeing is believing

Ironically, human language fails to describe the true power of these programs. You must really see for yourself. There are not only **online galleries**, there are a number of sites where you can actually play with generators.

Most of these offer some free use with varying terms (like earning credits by watching ads), but all impose conditions so that they are not abused to create deepfakes or fake news. Dall-e Mini, for instance, blurs out faces of any identifiable humans. Violent and pornographic images were removed from the training data to keep results family safe.

And like any popular vacation attraction, users may face extensive wait times as well.

Here are a few online offerings. Click on the blue words in the web version of this document to open links to the sites.

- GPT-2 – Several sites offer text generators. One of **the best generators** is DeepAI's. The more technically ambitious can **download** GPT-2 for their own machines.
- OpenAI's pages that explain **Dall-e** and **Dall-e 2** have lots of cool examples.
- Google's rival to Dall-e, **Imagen**, generates striking photorealistic pictures from plain text. The program is so powerful, they only show **examples** to illustrate what it can do.
- **Craiyon**, the latest online version of Dall-e Mini (**original** here) makes 9 different renditions from entered text that you can save.
- **Starry AI** is a sophisticated art generator offering precise controls over formats, styles, etc. Login with Google or Apple.
- **NightCafé** is simpler but also offers a great variety of style choices and a training demo.
- **Dream** by Wombo is a similar but totally free service where you can also mint NFTs with your images or purchase prints.

- **Botto** is an AI artist system that generates 300 paintings per day, has its own online gallery and deals in cryptocurrency.
- Buy abstract **AI paintings** for home décor.
- **Hotpot** offer an immense range of AI tools for generating online graphics and text with variable generous pricing plans.
- Finally, if all that is not enough, here's a list of **300+ GPT-3 demos and apps**. Whew.

From hidden depths

The **experts** all say that the abilities of these AI systems to sound like humans and create art like humans is not intelligence but mimicry. There's an old art school saying that "stealing is taking from one, research is taking from many". These systems, trained on thousands of curated examples, are better artists, having seen far more than any person has.

These writing programs like GPT-3 are **really good**, and they are quickly getting better to the point where they can **produce believable completions** to lost works. Creativity, whether of words or images, has always been regarded as a uniquely human expression of the emotions and ideas of the soul. But is it?

We don't really understand all that's going on inside these AI systems. For instance, researchers found that Dall-e will generate **nonsense phrases** on billboards when told to make an image with a sign included in it.

When one of these phrases, "Apoploe vrreraitais" is then entered, the system always generated images of birds. Included in a longer prompt, it resulted in pictures of birds eating bugs. This has led to speculation that Dall-e has invented its own secret language.

Perhaps this is a form of **hidden bias** that is not yet understood. But in that, humans and AI share one thing in common: what we do emerges from unseen depths. If the imitation is good enough, who is to say that there is **not** a ghost lurking in the machines?

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