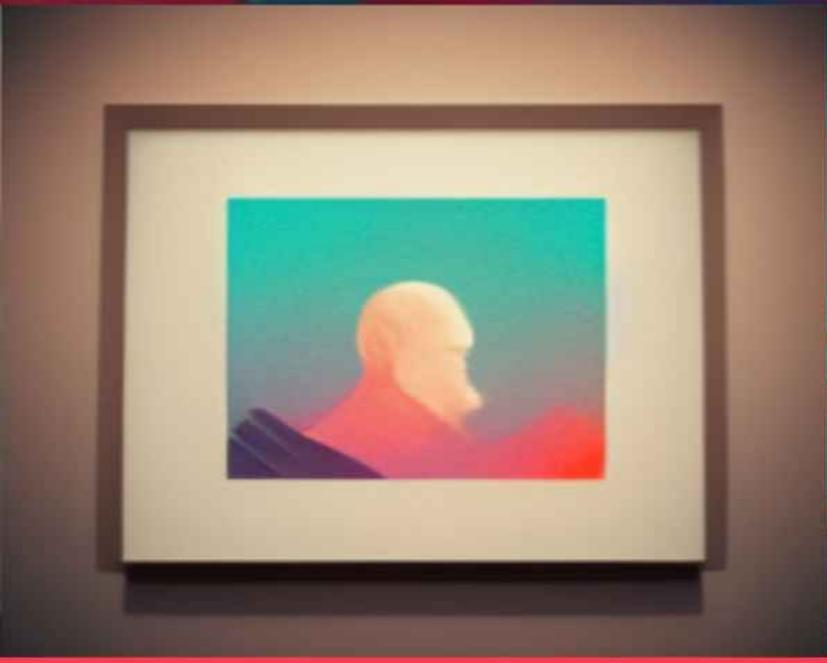
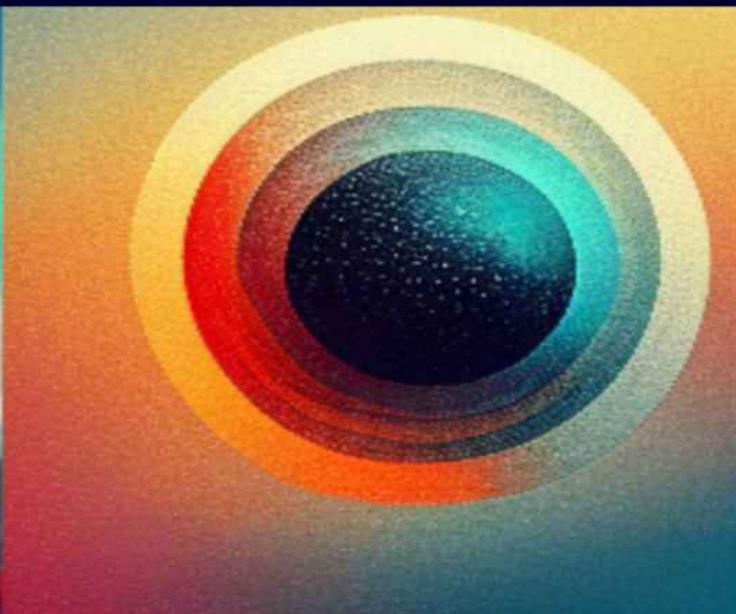


GENERATIVE — AI ART —

A BEGINNER'S GUIDE TO 10X YOUR
OUTPUT WITH KILLER TEXT PROMPTS



Oliver Theobald

Generative AI Art

A Beginner’s Guide to 10x Your Output with Killer Text Prompts

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First Edition

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Please note that a video version of this book is available as a free mini-course at <https://skl.sh/3u5Zd4X> (limited to the first 1,000 readers).

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INTRODUCTION

Within five years, AI is set to change everything in the creative space. From creative writing to generative art, 3D rendering, video, speech, and music, we are set to see advancements that will totally transform the way we create digital content.

The outputs one can achieve from AI prompt-based software are already impressive and their outputs are only going to improve over time—think in months, not years.

In the creative writing and generative art fields, there are already a dozen or more credible companies offering advanced software tools that can generate magazine-worthy illustrations or consecutive paragraphs in virtually any genre of novel. Technology observers such as Martin Shkreli and Kevin Rose have little doubt that we'll see a New York Times seller written by an AI within the next ten years. In the case of generative AI art, the results are already mind-blowing and there's controversy over whether AI-generated art should be outright banned from art competitions.

As with other trends before it, the news and social media attention will naturally see a flow of new investment into creative AI and the industry is set to become the next big thing for engineering talent, offering a unique and exciting opportunity for those interested in technological innovation. From creating new software that empowers users to manifest their creative vision for the first time, to detecting AI-generated digital artwork using deep learning algorithms, there is no shortage of possibilities and challenges to solve. By leveraging the power of artificial intelligence, companies will also unlock efficiency upgrades to existing software that wasn't possible before, while also dramatically transforming the software experience for the end-user. This last point is an important shadow trend that most people miss.

Future versions of Photoshop or Microsoft Office will rely less on iterative actions such as click-and-drag to push pixels into place and rely more on AI-powered text and voice prompts to tell the software exactly what to do.

Instead of hovering and pointing over the shoulder of an in-house designer, users will be able to highlight an area and change it by communicating directly with the software—all without any wait time. You will say or type in the iterations you want, and the AI will make it happen, instantly.

We are already starting to see signs of this transition taking place with online graphic design tools like Figma and Canva introducing new text-to-image apps on their platforms and Adobe adding generative AI technology to their existing software suite.

For other established players, these recent developments will come as a wrecking ball through the creative industry as AI art shoulders the low-end of the market before working its way up the value chain. Diversified and vibrant gig-based marketplaces such as Fiverr and Upwork have some space to maneuver but generic stock photography sites like Shutterstock are under threat of becoming entirely irrelevant.

User adoption, however, will take time, and perhaps the biggest obstacle holding AI art back is adoption among companies, especially given the valid risks and various ethical concerns involved (explored more in Chapter 13). While many people have experimented with AI optimization for their profile picture and shared it on social media, few “non-technical” people are using AI as part of their professional workflow. Even fewer people are actively experimenting across multiple platforms, learning the strengths and weaknesses of different software options, and taking action to learn and skill up within this new field of content creation.

For those early to the trend and curious to learn more about AI art, the following chapters will be your guide to this brand-new field. With this book, you will gain a solid understanding of the basic principles behind generative AI art as well as common techniques that you can start using today.

Generative AI Art for Beginners covers the basics of AI art, from its technological side to the practical possibilities of new software applications. It explains what text prompts are, how they work, and why they matter. The book also provides an overview of key topics such as framing and image parameters, as well as the limits of AI art creation. Additionally, you will find tips on how to effectively apply this knowledge to generate your own AI art. Finally, the book provides guidance on choosing and using AI art software and resources, as well as ethical considerations when working with technology in this field. By the end of this book, you will have a

comprehensive understanding of how to use AI software within your creative content stack and a deeper view of where this industry is heading.

Given that software development is moving so quickly, the chapters in this book will focus mostly on the key concepts and theoretical considerations behind creating AI art, such as text prompt construction, framing, and image masking, rather than in-depth instructions on how to use and navigate the user interface (UI) for each software solution.

Lastly, creating AI art doesn't require any specialized programming knowledge or even much talent for design. With the right software and guidance, anyone can quickly become a master at creating AI-generated artwork. That said, constructing a good prompt requires practical experience, including knowledge of special techniques, and some domain expertise in your subject matter to closely replicate your artistic vision. This is a skill you can easily develop, and you will also improve your knowledge of art and design along the way.

Ok, let's get started with generative AI art!

A GENTLE INTRODUCTION TO AI

There's a revolution unfolding in the art world. AI-powered software like DALL-E, Midjourney, Stable Diffusion, Craiyon, and a slew of other new software names are giving everyone the ability to generate art and images in seconds. What's more, all this can be done using simple text descriptions with no coding expertise or any real art experience required.

To understand the nature of AI art, it helps to have a basic understanding of what powers artificial intelligence and define some key terms—starting with AI.

AI, or artificial intelligence, has developed into a buzzword in recent years and as the technology advances, it is worth investing time to understand its potential. At its core, AI makes it possible to create machines that can learn, problem-solve, and supply an appropriate response. This includes not only the ability to recognize patterns and make decisions but also the ability to interact with humans and act autonomously or independently. This is achieved by first teaching the computer how to recognize patterns in existing data and then programming it to make independent decisions based on new input data. This is important because it makes it possible to solve problems that were previously too difficult, time-consuming, or impossible for humans.

As new algorithms are developed and techniques are refined, AI technology has the potential to shape the future in numerous ways and revolutionize many aspects of life, from healthcare and transportation to content creation, music, and how we interact with software as a user. It is an exciting field and there will soon be many more possibilities for AI to be used in our professional and personal lives. Examples here include searching for songs using text descriptions (i.e. “early 2000s pop with a brash and uplifting chorus”) to creating an AI narrator trained on your exact voice. For a glimpse of the future, you may like to check out theresanaiforthat.com, which lists newly released AI-powered software offerings.

Lastly, it's important to remember that AI is not one singular technique, but, rather, a broad umbrella term that spans a collection of techniques. This includes natural language processing (NLP) which makes it possible to understand human language, image recognition to identify objects in an image or video, robotics, computer vision, and machine learning. The specific techniques used for generating AI art are based primarily on a combination of natural language processing, image recognition, and machine learning.

Machine learning

As the backbone of AI, machine learning gives computers the ability to learn without being explicitly programmed. This, though, is an oversimplistic explanation. To be more specific, decisions are generated by deciphering relationships and patterns from data using probabilistic reasoning, trial and error, and other computationally-intensive techniques. This means that the output of the decision model is determined by the contents of the input data rather than any pre-set hard rules defined by a human programmer. The human programmer is still responsible for piping data into the model, selecting an appropriate algorithm and tweaking its learning parameters, but ultimately the machine and developer operate a layer apart in contrast to traditional programming.

There are several categories of machine learning techniques, including unsupervised learning and reinforcement learning, but let's focus on supervised learning, which is the most relevant technique to AI art.

Supervised Learning

Supervised learning involves extracting patterns from known examples and using that extracted insight to engineer a repeatable outcome. Long before machine learning, various civilizations used this same approach to reverse-engineer everything from gunpowder weapons to automobiles. The Japanese car manufacturer Toyota, for example, used this approach to design its first car prototype. Rather than speculate or create a unique process for designing a car, Toyota created its first vehicle prototype after taking apart a Chevrolet car in the corner of their family-run loom business in Nagoya. By observing the finished car (output) and then pulling apart its

individual components (input), Toyota's engineers unlocked the design process kept secret by Chevrolet in America.



Figure 1: A representation of how Toyota built its first car model, Toyoto Commemorative Museum of Industry and Technology

This process of understanding a known combination of how inputs go into creating a set output is replicated in machine learning via supervised learning. The machine learning model analyzes and deciphers the relationship between input and output data to learn the underlying patterns. In the case of AI art, the algorithm looks at millions of images that are labeled with text descriptions such as “car”, “Toyota”, “building a car”, “wooden car frame”, “front of car”, etc, and with more data and more experience, it begins to learn what constitutes a car and other objects based on examples. This is what is meant by giving the computer the ability to learn without being explicitly programmed.

By decoding complex patterns from the labeled data, the model finds connections without human help and in the case of AI art, it is using NLP to understand the relationship between text (input) and images (outputs). After analyzing a sufficient number of examples, a trained model is formed (based on an algorithmic equation) that uses new input data (i.e. text) to

produce an output (image) based on the patterns it learned from previous input-output examples.

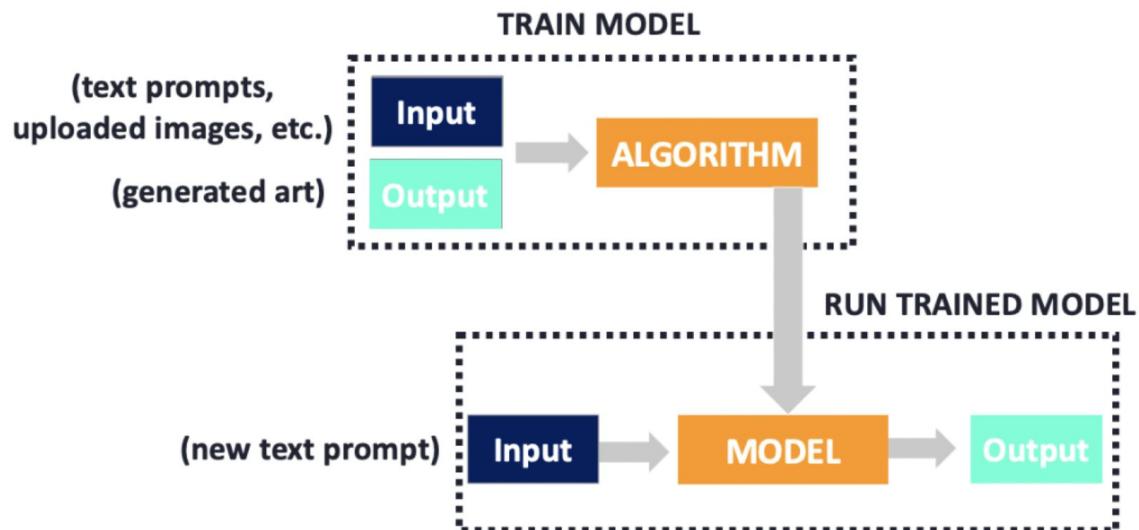


Figure 2: Supervised learning workflow

Natural Language Processing

While “AI technology” is clearly imprinted into people’s minds and investors’ watchlists, “natural language processing” is the real innovation helping to unlock new possibilities in the creative space.

While NLP overlaps with machine learning and particularly supervised learning in the study of existing patterns, it represents a unique subfield of AI and a new blend of machine learning.

Inspired by linguistics (the study of language and semantics), NLP was originally intended for parsing text in databases using coding rules systems, but over time, it merged with common algorithms from the machine learning world to evolve into a new breed of computational linguistics. This meant analyzing human language with little to no emphasis on numbers and the quantitative problem-solving that so heavily dominates other subfields of AI.

Put more simply, NLP helps computers to understand what people are saying. This works by designing models to analyze text and speech and discern the meaning behind it. For example, if you asked the model a question, such as "What's the weather like tomorrow?", then the NLP model can help the computer interpret that question and provide a relevant answer.

This is an important breakthrough as it helps users obtain information quickly, or in the case of AI art, generate a desired image output using just a few select words.

NLP, though, is not a new discovery. It has been around for decades and is used in many familiar applications today including Siri, Google Assistant, and Facebook, which use NLP techniques including voice recognition (using speech-to-text conversion) and retrieving text information to fulfill users' search queries. What is new, however, is GPT-3.

GPT-3

Recent breakthroughs in AI art have all come about because of a new model called GPT-3, which is an advanced machine learning model for studying language and generating text. GPT itself stands for Generative Pre-trained Transformer, and because we are up to the third version of this model, it's called GPT-3, and will soon be succeeded by GPT-4. The GPT project is developed by OpenAI, a research institution co-founded by Elon Musk.

After training this model on 570 gigabytes of text information (gathered and crawled from the Internet, along with selected texts such as articles from Wikipedia) using natural language processing, GPT-3 can now be used to generate art, music, poetry, and prose from text-based prompts. Additionally, the model is able to answer questions, write essays, develop summaries of longer text items, and translate various languages.

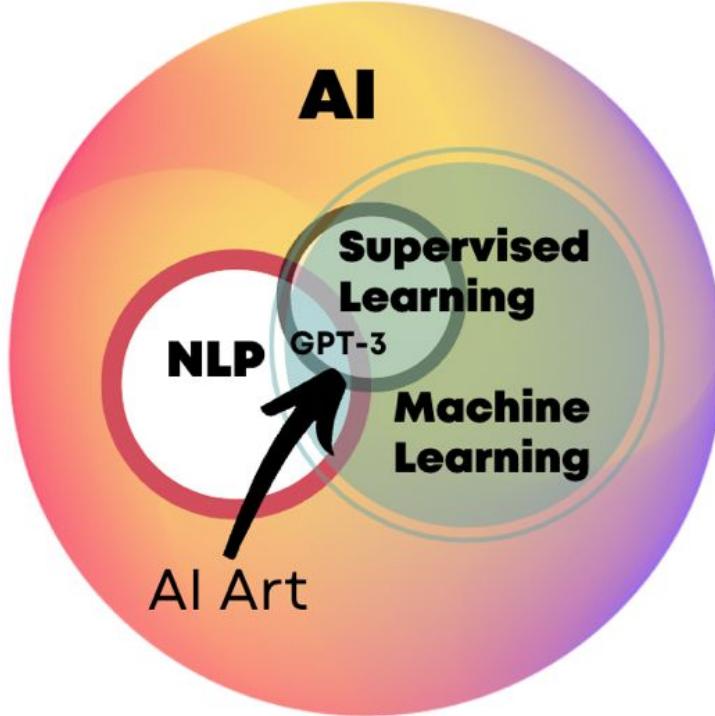


Figure 3: Overlapping fields of AI

This technology enables creators to use AI to explore new creative possibilities and create high-quality visualizations, text, and animations that would be time-consuming and expensive to produce using traditional methods. Additionally, GPT-3 provides a platform for experimentation in the realm of machine learning and its potential for creative expression. In this way, GPT-3 has revolutionized the way we think about content and opened a new era of experimentation for content creators around the world.

Generative AI Art

Generative AI art uses the capabilities of AI, including GPT-3, to generate unique and often complex images with minimal direction and input from the (human) end-user. These algorithms are taught to recognize patterns in data, detect relationships between shapes, colors, or textures, and manipulate these elements to create new works of art.

By combining the creativity and intuition of humans with the power of machine learning, generative AI art has become an increasingly popular method for creating truly stunning visuals. From abstract backgrounds to intricate designs, generative AI art offers limitless possibilities for creative

expression. At its core, this type of artwork focuses on exploring novel ideas and pushing boundaries—both artistically and technically. Ultimately, it allows artists to create works of art that merge their own creativity with the capabilities of AI. As such, it is a powerful tool for exploring and expressing ideas that would not be achievable through traditional means.

Alongside its aesthetic value, generative AI art can also be used in creative applications such as web design or game development. By combining the skills of people with the power of machines, this type of art provides an exciting platform for collaboration between humans and computers—allowing us to explore new ways to create, share, and experience art.

Lastly, generative AI art offers a way for anyone to unlock their imagination and experiment with artistic concepts that weren't possible before without a certain level of creative talent and training.

This chapter introduced a series of highly advanced technical concepts and while you don't need any AI knowledge to start creating AI art, it does help to have a baseline understanding. If you wish to learn more, I have other books and a Skillshare course available on the topic of machine learning, but for now, the key points to remember are:

1) Most of the AI software you will be interacting with is powered by GPT-3, and

2) Using supervised learning, the software will generate outputs based on the images it was originally trained on. DALL-E, for example, was trained on 650 million images with text descriptions of those images.

In the next chapter, we will dive into text prompts and their many forms.

THE ART OF THE PROMPT

To create generative AI art, you will need to provide what's called a **text prompt**, which is instructions for the AI about what you want to create. A prompt can be as simple as "**a person sitting at a café**". The AI engine will then do its best to generate an image based on the text prompt you provided. Much like how people have their own style for inputting keywords or phrases into online search engines, there is no fixed method or code for writing a text prompt. This means a prompt can be a list of words separated by commas (i.e. bear, tree), a fragment of a sentence (i.e. bear under a tree), an imperative (i.e. sketch a bear next to a tree), or a full sentence (i.e. A sketch of a bear sitting under a tree). Correct grammar isn't necessary as long as your instructions can be clearly understood, and the easier your prompt is to understand, the better.

The key is to use natural language as that's the language the AI is trained on. Natural language refers to human languages, such as everyday conversational English or what you might write in a text message, as opposed to an artificial language such as a programming language. This means you should communicate to the AI program more like it's a human and avoid using artificial languages like CSS and Python to write text prompts. However, keep in mind that there are exceptions, with one being the specialized syntax that comes with the AI software program such as **/imagine** in the case of Midjourney (which must be the first word of your text prompt) and other special commands for dictating the weighting, size, and other structural aspects of the image.

How to Create an Effective Prompt

Most AI software programs have a built-in feature to apply variations that let you riff on what you've already generated and often it will take scores of variations until you land on the exact feel and look you want.

In general, the more specific your prompt is, the more specific your outcome will be and the fewer iterations you'll need to create your desired result. At the beginning of this chapter, we looked at the simple prompt of "**a person sitting at a café**". While there is ample information here for the

AI to generate a relevant output, there's an opportunity to refine the prompt and generate a more deliberate and nuanced image result.

This is where **modifiers** come in. While your base prompt will generally describe one or more objects and their relationship within that scene, a modifier adds additional instructions regarding the stylistic design you want the AI to take.

A person sitting at a café in the style of an 1920's art deco poster

Base prompt

Modifier

If we take the original base prompt of "**a person sitting at a café**", we can add a modifier in the form of "**a person sitting at a café in the style of a 1920's art deco poster**". This will produce a much different result when compared to the original output that used a simple and generic prompt.

We can also go back and edit our original prompt to add even more detail. Let's update it to: "**a distinguished middle-aged man sitting at a Viennese coffee house in the style of an art deco poster from the 1920s**".

Next, keep in mind that most software programs come with a character limit. For DALL-E, the prompt cannot be more than 400 characters, which is more than enough for just about anything you would want to create.

However, if you are precise with your prompt and you curate the right words, then sometimes, less is actually more. In fact, you can generate decent results using just emojis—depending on what AI software program you are using.

Additionally, a simple adjective such as "art deco poster" already contains a number of pre-defined characteristics (i.e. rich colors, lavish ornamentation, geometric shapes, and the actual material/medium of the art in the form of paper and rectangle in shape) that you would otherwise need to list and define separately.

Artistic eras such as art deco or a decade like the 1990s will not only impact the style of the illustration but also the fashion, architecture, and other materials visualized in the illustration (unless otherwise defined). If, though, you find it difficult to capture a specific style using broad terms like

“art deco” or “grunge”, you can directly add extra details such as the location (i.e. Wall Street, New York), weather, time of day, and the political, economic, or social backdrop (i.e. Occupy Wall Street, September 11, the Global Financial Crisis, COVID 2020, etc).

For AI-generated photography, you can borrow domain-specific terminology to define everything from shutter speed to lens choice, lighting, and framing, or bundle all those attributes into a style of photography such as action shot, National Geographic cover, Japanese photobooth (purikura), selfie, or Vogue photo shoot. Likewise, if you want to create a specific visual style then you need to understand the framing (angle), material, lighting, and materials for replicating that given style.

The ability to articulate and describe visual art in words will become a skill that you’ll develop over time and maybe even send you down an exciting rabbit hole as you learn the fine details and specialized terminology for various subject matters. When I watch a movie now, I find myself attempting to articulate different scenes in my head as text prompts that I use later.

In addition to becoming more articulate with your text prompts, you also want to do your best to confirm the details in your art are accurate and representative, which means having a strong understanding of your subject matter. To generate a specific image of a medieval knight, you need to understand the fashion, social class system, and weapons of that period, including the names of some famous medieval knights in order to be more specific with your text prompt. For example, there’s a big difference between a Templar knight dressed in white with a red cross on his uniform and an English knight from an earlier period who donned their own unique crest and fashion.

While so far we’ve looked at the benefits of precise and specific text prompts, it’s also possible to go the opposite direction and let the AI art generator take the creative reins. Rather than using a detailed prompt, you can hold back and use a more vaguely defined prompt. This technique might be useful if you don’t know what something should look like and there are few existing references, such as a stadium built in the metaverse.

You should also keep in mind that the same text prompt will produce dramatically different results across different AI software. The software solution Midjourney, for example, skews towards a more artistic style, whereas DALL-E and Craiyon sit on the more conservative and literal end

of the design spectrum. In either case, you may need to provide more detailed instructions in your text prompt if you want to overwrite the natural style of that given software.

While AI art software solutions are incredibly powerful, they are not infallible. Despite their impressive accuracy, AI-driven software can stumble when tasked with complex or specific tasks. This is particularly true in cases where the software is presented with new data and forced to come up with an answer that it has never been seen before. In such scenarios, the AI software can struggle to come up with a relevant output or may generate a wrong one. Additionally, the software may be limited by the amount of training data it was given, as without sufficient input data it may not be able to accurately generate an appropriate response.

DALL-E, for example, was trained on 650 million images with text descriptions or “captions”. It, however, was not explicitly taught and programmed to recognize anything and everything. Instead, it was set up to study 650 million images and captions, and then come up with its own conclusions on what certain words mean. As DALL-E has not been pre-programmed line by line, the outputs therefore aren’t perfect and unintended results are part of the design process. Additionally, because of the model’s randomness, the exact same text prompts used twice are unlikely to generate the same results, and sometimes you might have to try the same text prompt multiple times to achieve the intended result.

Next, while it’s quite likely that the AI learns from new data over time, there may be a gap in time between something going mainstream and the AI learning what that thing is—as it must go back and study training examples in the form of images paired with text descriptions. Although it might be possible for the AI generator to easily replicate the style of an established artist such as Van Gogh or depict a politician like Obama, there could be a delay before the model is reliable at recreating recent trends, subjects, or words.

Therefore, it’s important to remember that the AI model doesn’t know everything like an all-seeing genie or a god-like figure; it only knows what it’s trained on. This means you can’t tell the AI generator to reliably reveal the exact face of Satoshi Nakamoto (founder of Bitcoin) or Banksy (anonymous artist), but you can still ask the AI generator to make an attempt based on images already in circulation.

Lastly, your prompts need to be context-specific and well-defined. If you use the word “me” in your text prompt, then the AI has no way of adding your own physical resemblance to the image, which makes your prompt ill-defined. Even if you are famous and there are portraits and images available of you in the public domain, you will still need to spell out the exact name of the person (which in this case is your own name) and maybe also add context in case there are other notable people who share the same name.

AI ART SOFTWARE

In this chapter, we will review a number of the leading software options on the market for creating generative AI art.

DALL-E | openai.com/dall-e-2

DALL-E, or DALL-E 2 (its latest version), is a revolutionary AI software developed by OpenAI, a San Francisco-based research lab.

Unlike other image generation algorithms, DALL-E works with both generative and discriminative models, allowing it to create both abstract and realistic images. Its algorithm is also capable of understanding complex sentences, involving multiple objects and their attributes, including color, shape, size, style, lighting, and location. For instance, it can easily generate an image of a red rectangle next to a blue triangle. It can also generate more abstract, fantastical images, such as a pink cloud with two eyes and a mouth.

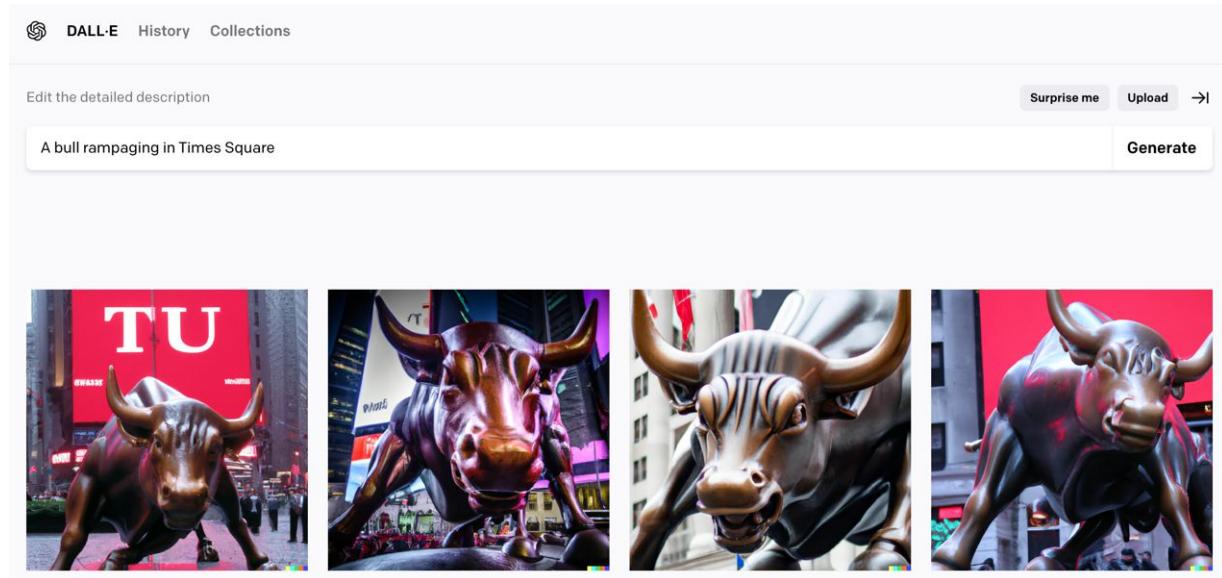


Figure 4: DALL-E's clean user interface and image generator tool

The web user interface for DALL-E is easy to operate and navigate. After signing up for a new account with OpenAI, you can type in your text prompt or upload an image to edit directly or generate variations. Images

that you generate using DALL-E are then saved to your account for convenient access later. One of its best features is the image uploader tool, which is useful for manipulating existing art and design elements to create novel combinations. To illustrate, it can take an existing photograph and add a unique element, such as a flying pig or a robot arm. This opens up tremendous possibilities for creative exploration and experimentation, allowing artists and designers to easily explore new concepts and generate inspiring visualizations.

After an initial invite-only beta release, DALL-E is now available for users in most (not all) countries. After signing up, you will have access to 50 credits (which gives you 50 image generations and a further 15 at the start of each month). After that, you can upgrade your monthly or yearly subscription to access more credits.

While the landscape is changing rapidly, DALL-E is arguably the most powerful AI art generator on the market and is definitely worth testing and comparing with other popular options such as Midjourney.

Midjourney | www.midjourney.com

Midjourney stands out among the first generation of AI software, mostly for the fact that it's far more chaotic and complicated to use.

Unlike DALL-E and most other AI art generation software, Midjourney wasn't released as a standalone web application. Instead, you will need to use Midjourney through Discord (available as a desktop or mobile app), which is a popular chat app prominent in the gaming and crypto space, in order to create your AI-generated images. On top of that, there are thousands of other users creating and modifying their AI on the Midjourney Discord channel at any given time. While the constant flood of text prompts inside the chat rooms can be distracting, the shared work environment does offer a valuable opportunity to gain inspiration and observe the workflow and results of other users.

Once you've joined the Midjourney channel on Discord, you will be able to create images using the **/imagine** command followed by your text prompt, which are instructions on what you want the AI to create. Midjourney offers everyone a limited trial of 25 queries or image generations, and then several options to buy a full membership with unlimited or more generous image generation limits as well as commercial terms.

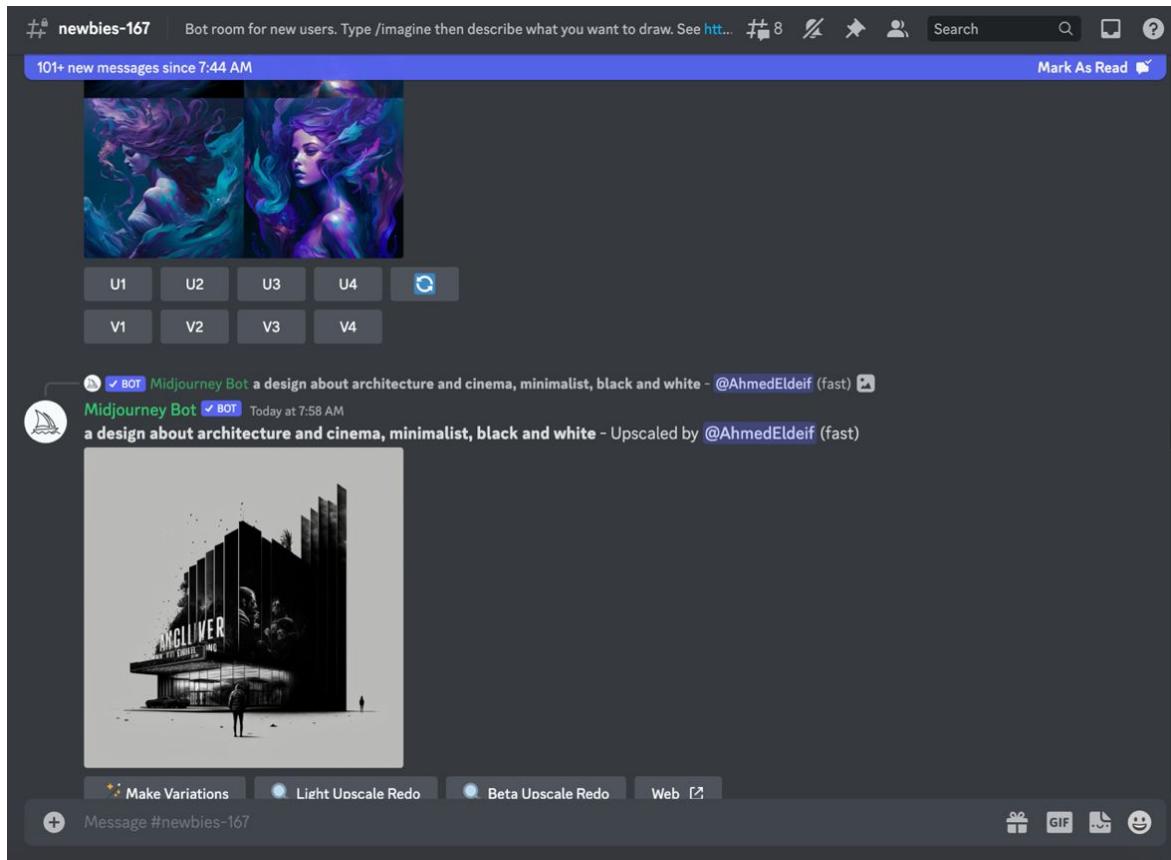


Figure 5: Midjourney’s Discord channel which doubles as its image generation platform

Midjourney’s primary strength is that it offers an advanced range of parameters to customize your generated artwork, such as resolution, quality image, and complexity. It also provides tools for integrating animation and motion into your visuals to help them stand out even more. This makes Midjourney ideal for users willing to learn and experiment, enabling anyone to create beautiful works of art that are tailored to their individual style.

In terms of its artistic output, Midjourney leans towards more abstract and surrealist designs and is particularly good at outputting futuristic or cyberpunk-style art. The software, however, is less well-suited for generating realistic art compared to DALL-E. To compensate for this bias towards abstract design, you may need to add the terms “realistic”, “photo-realistic”, and “realism” to your text prompts.

While Midjourney has a steeper learning curve than its website-based peers, it is well worth the time investment. Personally, Midjourney has become an invaluable asset in my own AI artist toolkit.

Craiyon | www.craiyon.com

Formally known as DALL-E mini, Craiyon was created by a number of team members involved with DALL-E, meaning there is some cross-over in terms of product development and history between the two products.

The user interface for Craiyon is delivered through a web browser that you can access on your PC or mobile device. There is also a mobile app available for Android users.

The key advantage of Craiyon is that it's quick and easy to use and it comes with unlimited usage. Using Craiyon, you can generate art in minutes and download those images for free. You can also create as much art as you want, and, in fact, you don't even have to sign up for an account.

The downside is that the results are slow to generate (up to two minutes) and low resolution. Also, as the images you create using this software are for non-commercial use only, Craiyon is not intended for commercial design scenarios. Instead, Craiyon is more suitable for creating fun images to share with friends and family or general experimentation. Note that Craiyon also asks users to "Please credit craiyon.com for the images" that are used publicly.

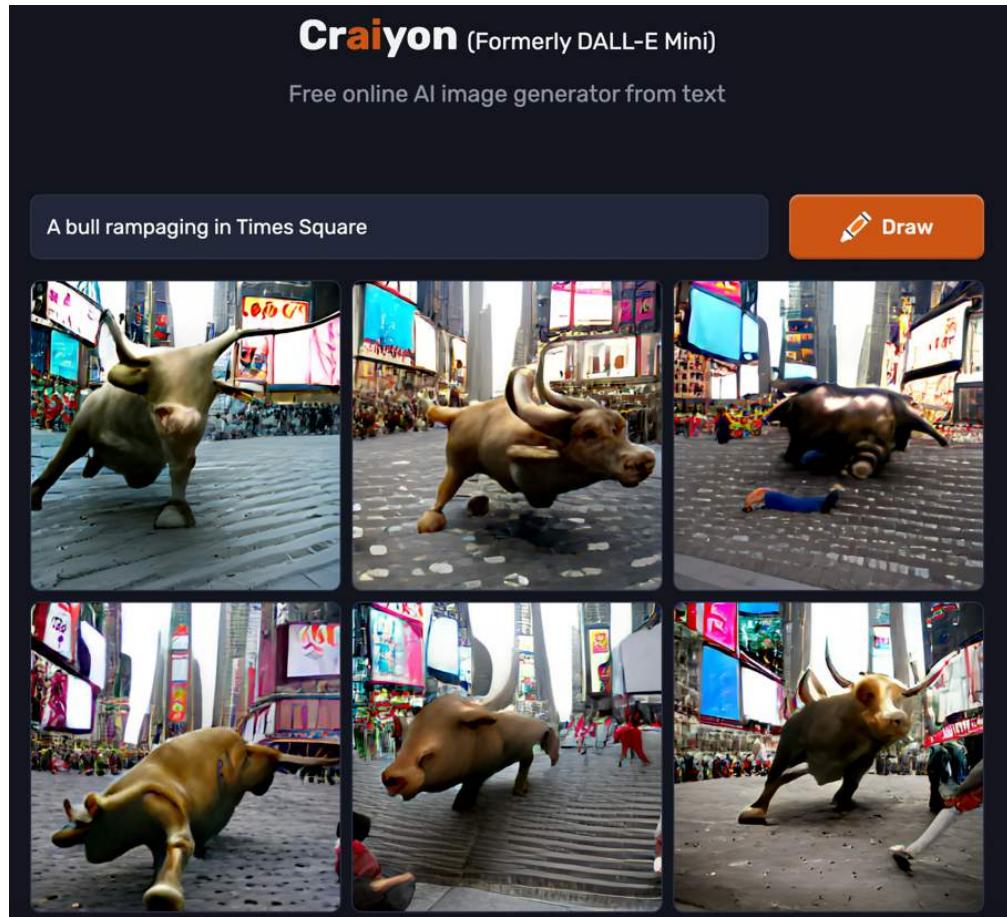


Figure 6: Craiyon's basic web interface

Lastly, Craiyon also offers a Print-on-a-T-shirt service. For \$29 USD you can purchase your AI art design on a t-shirt, hoodie, tie-dye t-shirt, or long sleeve t-shirt. Obviously, this is one of the ways Craiyon monetizes its art services, in addition to donations and ad banners that dominate its website.

Stable Diffusion | www.stablediffusionweb.com

Stable Diffusion is another powerful tool for artists and designers. Unlike DALL-E and Midjourney, Stable Diffusion has an open-source policy that lets you bypass blocked content restrictions that you might encounter with other AI software.

With no account signup required and fast image processing (approximately 10 seconds), you can start generating images immediately. The downside of its simple user interface and the lack of sign-in options is that you can't

easily view images that you previously generated, and, instead, you will need to save the results to your computer.

Stable Diffusion Playground

Just enter your prompt and click the generate button.

No code required to generate your image!

Due to the large number of users, the server may experience problems. If you encounter an error, please try again.

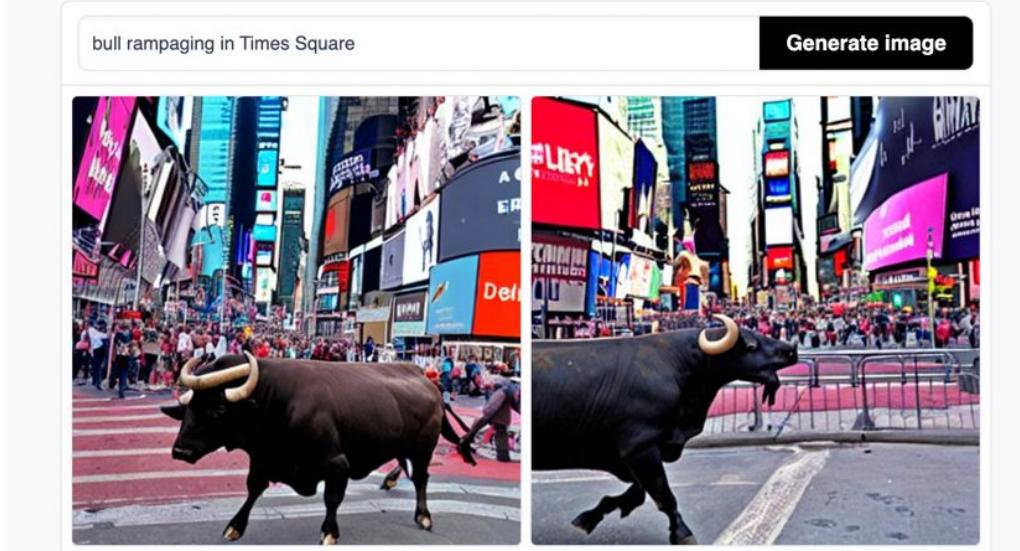


Figure 7: Stable Diffusion image generator tool

Stable Diffusion also currently lacks the features of its software rivals, such as image uploading and aspect ratio controls. However, the developers recently added a negative prompt box and new features will continue to be integrated.

On the plus side, Stable Diffusion is fast, free to use, and the results are far superior to Craiyon and other free AI art software.

In terms of its artistic style, Stable Diffusion is similar to Midjourney and favors a more abstract and surrealist style of artistic expression. As with many other software programs, it also tends to struggle with capturing symmetry in human faces.

StarryAI is an AI art generator app and web application that lets you generate NFTs (non-fungible tokens) using text prompts to transform your words into works of art. The platform allows users to publish NFTs on different blockchains including Ethereum and Binance Smart Chain, enabling NFTs to be easily distributed and traded on various networks.

The StarryAI design studio lets you choose between their Argo (standard) and Altair (more dream-like and abstract) AI models and comes with a nice number of features including image uploader (for prompt inspiration), canvas size, the design choice between realistic or artistic, and runtime (a trade-off between using more credits and better results).

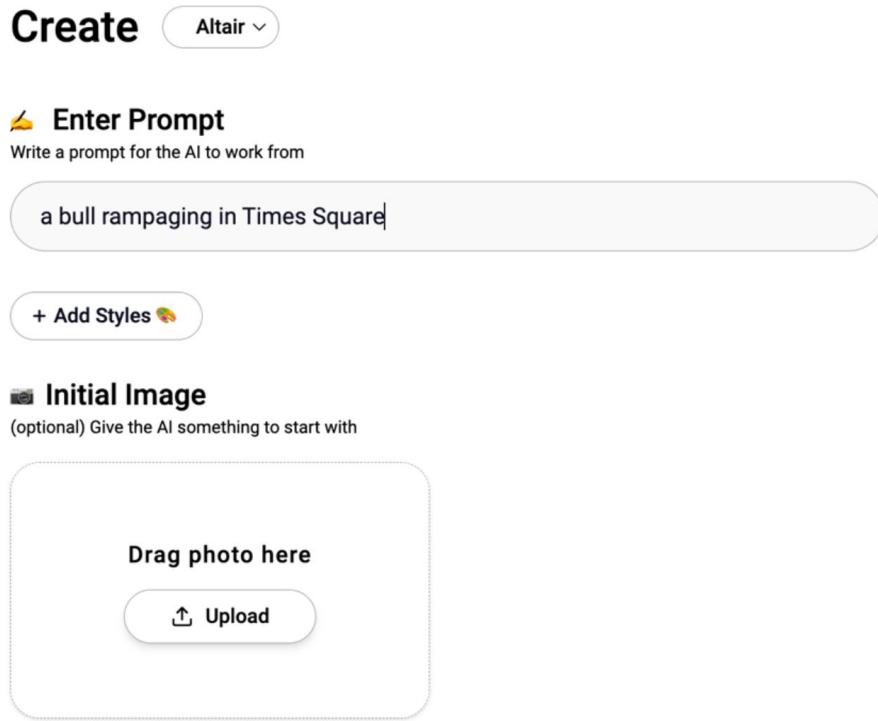


Figure 8: StarryAI image generator tool

Importantly, StarryAI also gives you full ownership of your creations, which you can use for your next creative project, print, share on social media, or sell as an NFT, giving artists an extra avenue to monetize their creativity. Note that while your art creations belong to you, and you can do whatever you like with them, you are still subject to copyright laws in your jurisdiction and you may need special permission from the copyright owner of any input image(s).

Using StarryAI, you can generate up to five artworks for free daily and without watermarks. However, you will need to buy credits to enjoy full usage. StarryAI is also available for free as an app on iOS and Android.

Nightcafe | creator.nightcafe.studios

Nightcafe offers a similar design suite and pricing system (pay-per-credit) as StarryAI and lets you generate up to five artworks for free daily.

Whereas StarryAI focuses more on NFT creation, Nightcafe lets you print your creations and have them mailed to your home. However, rather than print your designs on a t-shirt or clothing item (like you can on Craiyon), StarryAI allows you to print your designs as a poster on thick and durable matte paper.

Similar to StarryAI, Nightcafe provides extra settings including artistic style, aspect ratio, prompt weight, and image resolution.

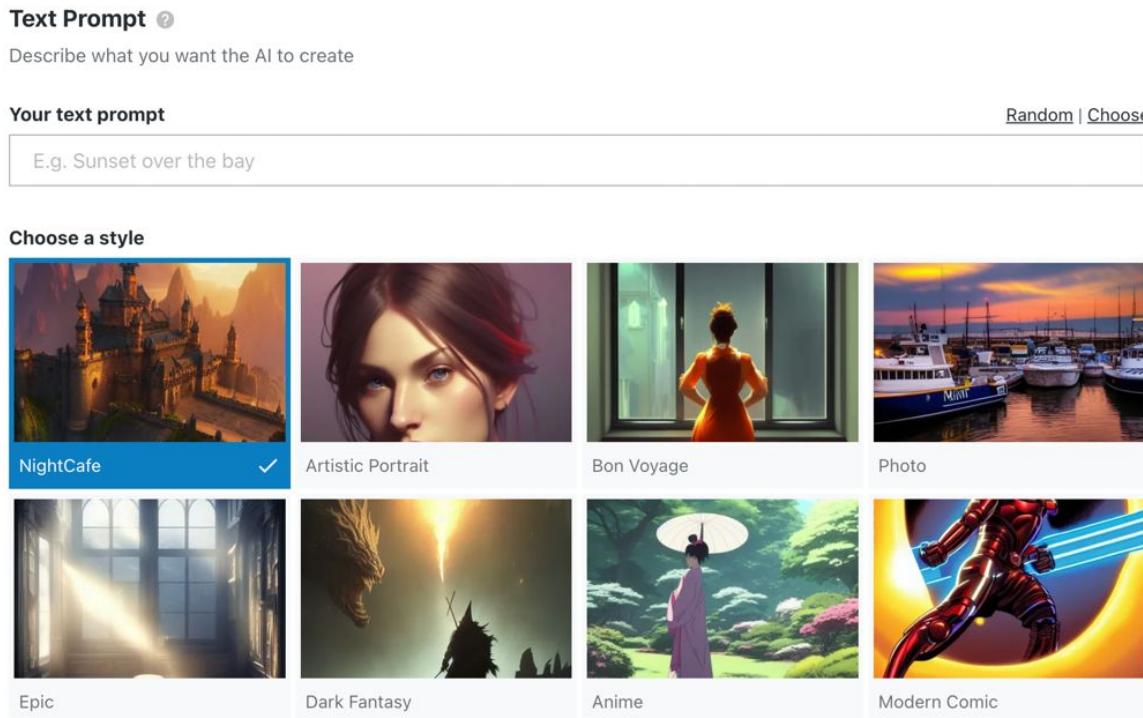


Figure 9: Nightcafe image generator tool

Synthesys X | synthesys.io

Synthesys is a Google Chrome plugin that you can use to quickly generate variations of existing images without the need for text prompts or special

inputs.

By right-clicking on an image that you find online and selecting “**Replicate the image**”, you can generate royalty-free images that are relevant and similar to the original image.

According to Synthesys X Co-Founder Oliver Goodwin, the mechanics of this reverse-engineered image generation project works by analyzing the original image, translating it into a text description, and then creating variations based on that text input (similar to other AI art software).^[1] This allows the Synthesys X Chrome extension to create unique images without reproducing or manipulating the original image.

While it’s still early to give a verdict on the legality or ethical grounds of this new plug-in, it’s definitely easy to use and offers something different from the other software currently available.

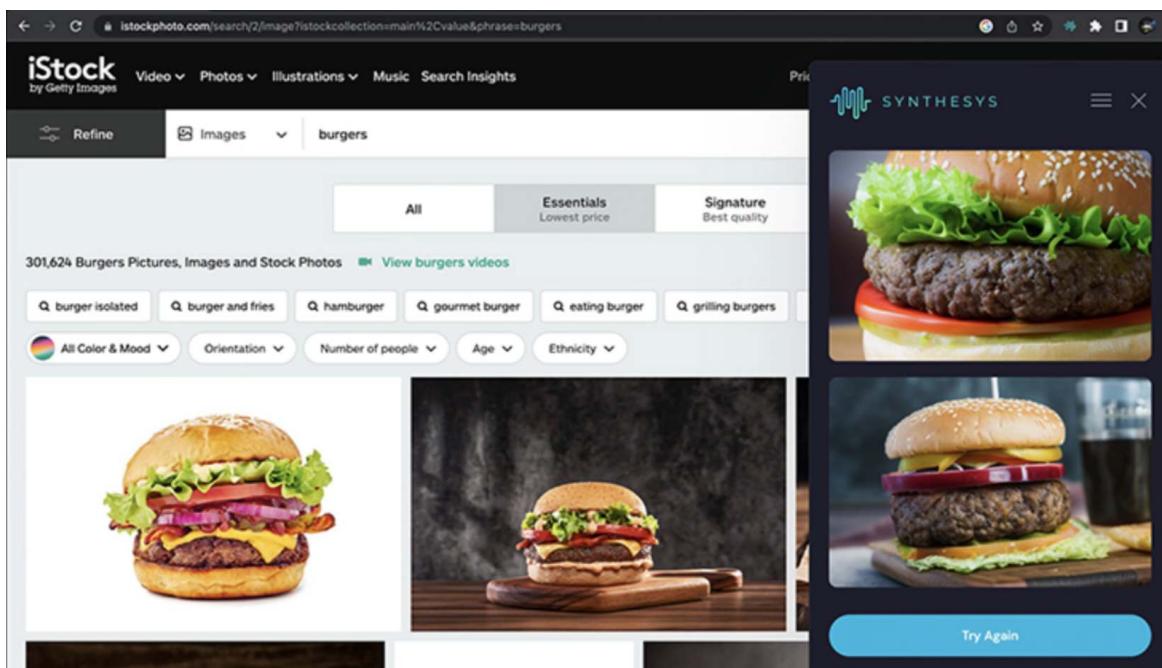


Figure 10: Using Synthesys X to generate a hamburger using stock photography as a prompt

Art Examples

Text prompt: cute boy wearing glasses, curly hair, pixar style, 4k

Craiyon



DALL-E 2



Stable Diffusion



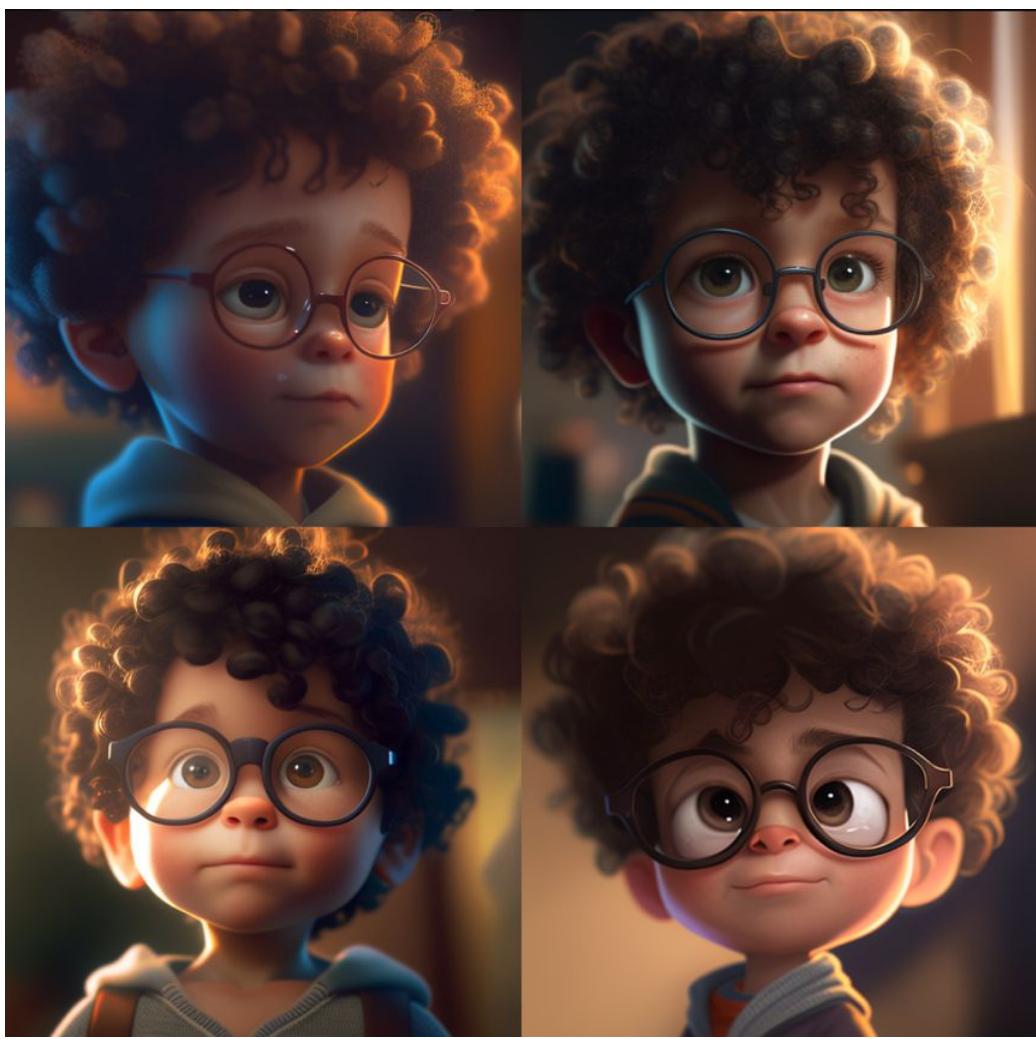
StarryAI



Nightcafe



Midjourney



CRAIYON DEMONSTRATION

To create our first AI-generated design, let's explore Craiyon.com, which is one of the quickest and easiest options to start your journey with generative AI art.

In terms of getting started, there are far fewer steps to creating your first art piece than Midjourney and DALL-E. There is no sign-up, no verification, and nothing to download. In fact, all you have to do is go to craiyon.com, enter your text prompt in the search bar and click the orange “Draw” button.

You will need to wait approximately 30-90 seconds for the model to generate your art request. Once it's done, Craiyon will spit out nine options in a three-by-three grid for you to choose from.

In general, the quality of the art is good, as you can see here in Figure 11. The image quality, meanwhile, is passable but not ideally optimized for production level—with the image resolution much lower than its competitors including Midjourney and Stable Diffusion.

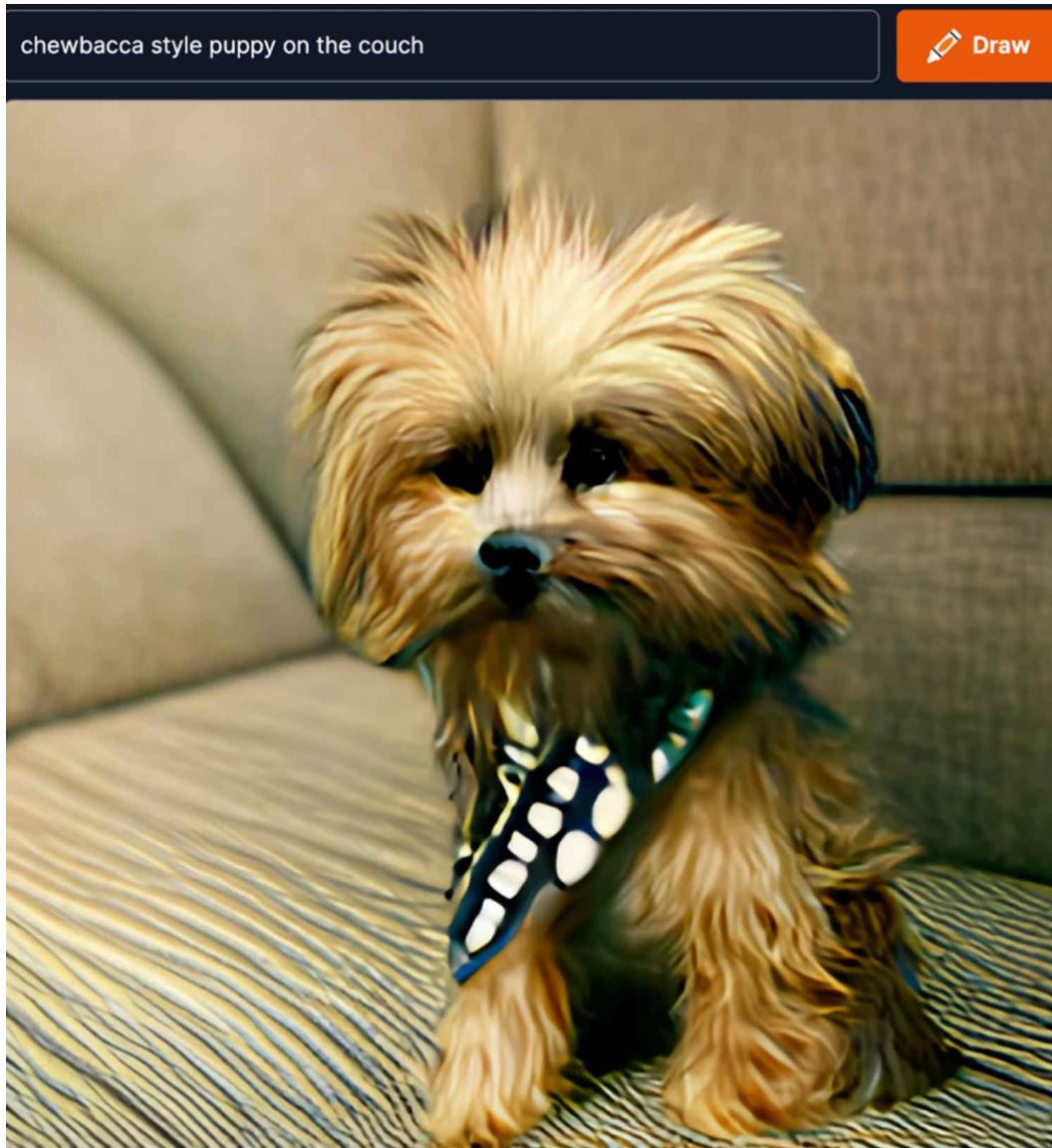


Figure 11: Chewbacca style puppy created on Craiyon.com

Regarding the other drawbacks of this free service, if we look at the tools and features, there are far fewer options than Midjourney and other platforms for remixing your art, uploading an image as input data, and controlling specific details about the art including aspect ratios. Additionally, as mentioned, the image quality is a lower resolution than other options on the market, which makes Craiyon a fun tool to share with friends and for creating mocks-up, but not suitable for enterprise needs and commercial usage.

Finally, Craiyon can be hit-and-miss in terms of output quality. The software struggles with rendering human faces as you can see in Figure 12,

using the prompt of “a photorealistic image of a TV anchor presenting the news”.



Figure 12: A photorealistic image of a TV anchor presenting the news, Source: craiyon.com

Therefore, for human faces, I recommend shopping around for another software option. That said, for images without human faces, the results can be quite impressive, and the free online generator is a great starting option for generating AI art.

MIDJOURNEY DEMONSTRATION

In this chapter, we will explore Midjourney, which is one of the more popular software options for creating AI art. Using Midjourney, you will be able to create 25 images before needing to subscribe for a membership with their service. However, for the purpose of this demonstration and the project in the next chapter, you won't need to spend a dollar.

Note that to use Midjourney, you should be at least 13 years old and meet the minimum age of digital consent in your country. If you're not old enough or you have family members wanting to use Midjourney, a parent or guardian can agree to the terms on your behalf.

It should be underlined that Midjourney is proactive in making its platform services PG-13 and family-friendly. They state on their website: "Do not create images or use text prompts that are inherently disrespectful, aggressive, or otherwise abusive."

They also state, "No adult content or gore... Please avoid making visually shocking or disturbing content. We will block some text inputs automatically."

From time to time, you may also find some words or phrases are blocked and you won't be able to make images using them. If you see the red cross emoji pop up next to your work, interpret this as a warning about your content's suitability. In other situations, your content may be deleted from view or just not produced at all.

You can also self-police your content by deleting it yourself using the red cross emoji reaction in Discord. This will delete the image from public view and help save you from getting into trouble.

If you are producing adult, horror, or content not suitable for minors, you may want to look for other software solutions like Stable Diffusion, which is open-source and allows you to create whatever you want.

Note that a video version of this chapter is available as a free mini-course at <https://skl.sh/3u5Zd4X> (limited to the first 1,000 readers). This mini-course is free (you don't need to purchase a Skillshare

membership) and leads you step-by-step through the workflow described in this chapter.

Getting Started

To get started, you first need to register a Discord account at discord.com. Discord is a popular instant messaging social platform and is free to join. After registering for a free account, you can choose to download Discord onto your computer as an app or open Discord directly from your web browser.

After you have completed setting up Discord, you can navigate to the midjourney.com website and click on the “Join the beta” button displayed on the homepage. You will be automatically redirected to Discord, either within your web browser or directly to the desktop app (if already downloaded).

Once you are inside Discord, you will next need to confirm that you are inside the official Midjourney channel. This means you should see a green tick when you hover your mouse over the Midjourney icon. Once confirmed, you can check out the Welcome message, which includes key and up-to-date practical information about the service.

Step 1: Go to Midjourney Discord channel

Navigate to one of the "Newbie" bot channels inside the Midjourney Discord server. Note that there are many Newbie channels and you don't need to enter a specific channel. If forced to choose, I would simply look for a channel with as little activity as possible to ensure slightly faster results.

If you don't see any Newbie channels, confirm that you are on the official Midjourney server or try restarting the Discord app or webpage.

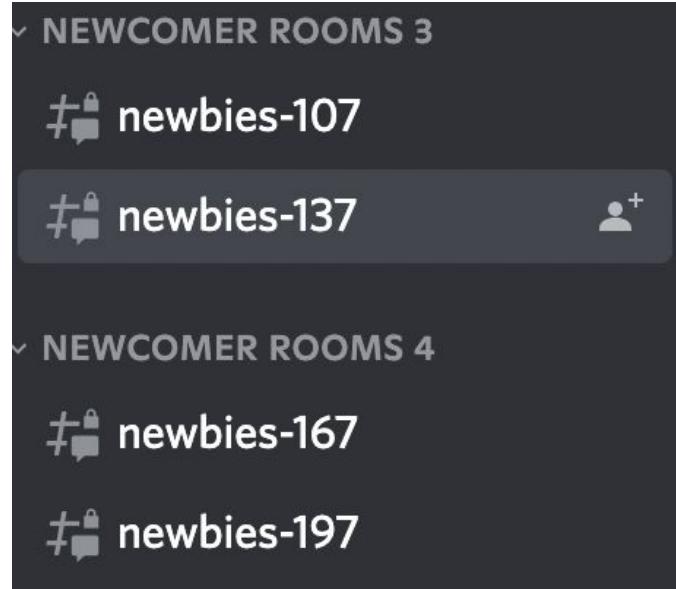


Figure 13: Selecting a newbie room on Discord to create your image

Step 2: Initiate image generation

Once you're inside a Newbie channel, you can check out what other people are creating and take note of their text prompts and choice of keywords. When you're ready to start creating, you can click on the chat box tab at the bottom of the chat feed and type in **/imagine**. As you start typing, you will notice a tab pop up above your text, which you will need to click on in order to confirm that you want to create a new image.

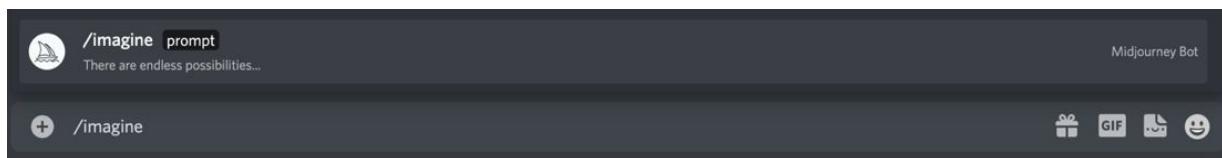


Figure 14: Initiating the /imagine command to create your first prompt

Step 3: Enter full text prompt

Enter the full text prompt you wish to use.

Please note that Midjourney asks you to respect their "[Content and Moderation policy](#)" by keeping content PG-13 and avoiding upsetting imagery.

For this demonstration, I will use "Barack Obama playing bass guitar" with no specific style defined.



Figure 15: Creating a text prompt using Midjourney inside Discord

Once you are satisfied with your prompt, you can press “**Enter**” on your keyboard or click the send button just like sending a message to someone on a chat app. This action will deliver your request to the Midjourney Bot, which will start generating your image.

Based on the text prompt you entered, the Midjourney Bot will generate four options, which will take a minute or less to deliver.

The results will start out looking fuzzy but will gradually become more refined as the progress indicator reaches completion.

Step 4: Create a new variation

Once the progress indicator has reached 100%, you will see a two-by-2 grid of finished images and two rows of buttons below.



Figure 16: Midjourney image results

The top row of buttons is reserved for upscaling your images. Upscaling an image means generating a larger pixel version of the selected image, approximately 1024x1024, which will make your images look crisper and automatically add additional details to give your image its finishing touches. In other words, you can think of the original two-by-two grid of images as mockups that the AI designer has provided, while reserving resources for later iterations. The upscaled version can then be thought of as the final version, which is ready for use and up to production level in terms of image quality.

Note that the numbered buttons **U1** (top-left), **U2** (top-right), **U3** (bottom-left), and **U4** (bottom-right) each map to an individual image, starting on the left and moving to the right. If you wanted to upscale the first image, for example, then all you need to do is click on **U1**.

The next option is to create variations of your art using the second row of buttons. Creating variations will generate four new images that are different but still similar in overall style and composition to the image you selected from the four mockup options. Again, the **V1**, **V2**, **V3**, and **V4** buttons each map to an individual image from the two-by-two grid above.

For this learning exercise, let's go ahead and click on **V1** and see what the Midjourney Bot delivers to us as part of a variation request. Keep in mind that upscaling or creating a variation counts towards your quota of 25 free images. (I will show you at the end of this chapter how to check your free image quota so you know how many free images you have left.)

As there are many other people in the channel creating art using the Midjourney Bot, you might need to scroll up from the bottom of the chat feed to find your own image request.

After clicking **V1**, the Midjourney Bot has now come back with a two-by-two grid of variations based on the original image that we selected.



Figure 17: Midjourney image variation results for V1 (variation 1)

Step 5: Upscale your image

Next, let's try an Upscale by clicking on **U4** which maps to the image in the bottom right position of the two-by-two grid.

At this point, you may need to scroll around the Discord channel to find your new output among the others that are being generated every few seconds by other users. This is one of the downsides of using Midjourney and Discord as it can be hard at times finding your own art!

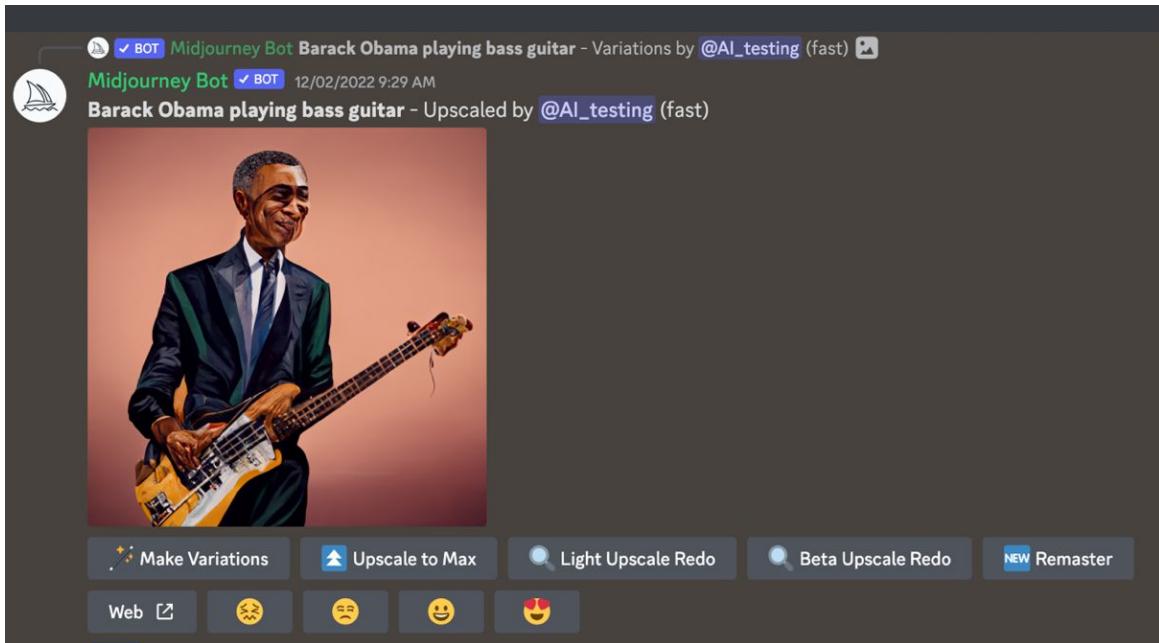


Figure 18: Midjourney upscaled image results using U4

Here we can see that the Midjourney Bot has generated an upscaled version of our original image. This new version contains more detail and depth compared to the mockup version we selected, and overall, looks a lot better! After upscaling an image, you will have a few more options displayed below to choose from. The first option (**Make Variations**) is to generate variations of the image results as we did before—think of this as telling the AI designer to riff or remix what's been created so far.

The second option is **Upscale to Max**, which upscales the image to an even larger resolution of approximately 1664x1664. **Light Upscale Redo**, meanwhile, upscales again without adding as much detail.

Step 6: Save your image

In terms of saving the image for future use, there are a few options available. One option is to send the image to yourself by asking the Midjourney Bot to send you a direct message in Discord containing the final image result. To do this, click on the add reaction icon in the top right (above the image) and search for the envelope emoji by typing in “envelope”. After clicking on the envelope emoji (✉), Midjourney will automatically send the image to you in a separate message window, which

you can find at the top of the left-hand sidebar containing all your messages.

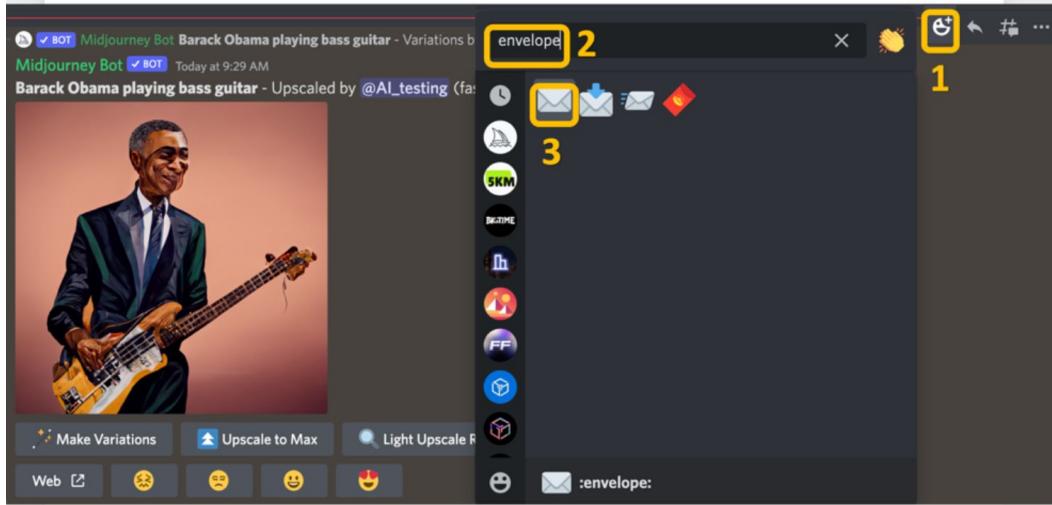


Figure 19: Sending your results as a direct message using the envelope emoji inside Discord

In Figure 20, we can see the final image result in a direct message, which you can find on the left side of the Discord application.

To open the image to full size, simply click on the image. You can also click on “**Open original**” to open the image in your web browser. To save, right-click and choose “**Save image**” from the dropdown menu to save the image to your computer. Note that if you are using Midjourney on the Discord mobile app, you will need to tap the image and then tap on the download icon.



Figure 20: The saved result is sent to your direct messages inside Discord

Other Features

Check Image Quota

To check how many image generations you have remaining as part of your free or paid membership quota, you can continue using the direct message window or jump back to the Newbies channel within the Midjourney server and type in **/info** and then click on the pop-up tab above.

Private and Public Mode

Using **/private** and **/public** you can toggle between these two different modes. In private mode, your jobs are only visible to you. In public mode, your jobs are visible to everyone in the gallery, even if you are creating them in a thread or a direct message. However, note that access to Private Mode costs an extra \$20 per month.

Show

Using **/show** and inserting the job number, you can recover the ID of a job in your gallery in Discord, producing the resulting image and the upscale and variation buttons. This allows you to essentially revive any job you generated yourself, bringing it into any bot channel even if you lose access to the original prompt.

To locate the job number of your art, you must first use the envelope emoji to send the image and metadata (including the job and seed number) to yourself on Discord as a direct message from Midjourney.

AI-Generated Text Prompts

Lastly, to take your text prompts up a level, you might like to try using external AI software to quickly craft text prompts that support your creative vision. Character.ai, for example, makes it easy to create text prompts for AI art via its free chatbot interface.

Character.ai is a new tool that lets you create AI characters that you can chat with, including Elon Musk, Plato, Giga Chad, and even an AI character for teaching you Japanese.

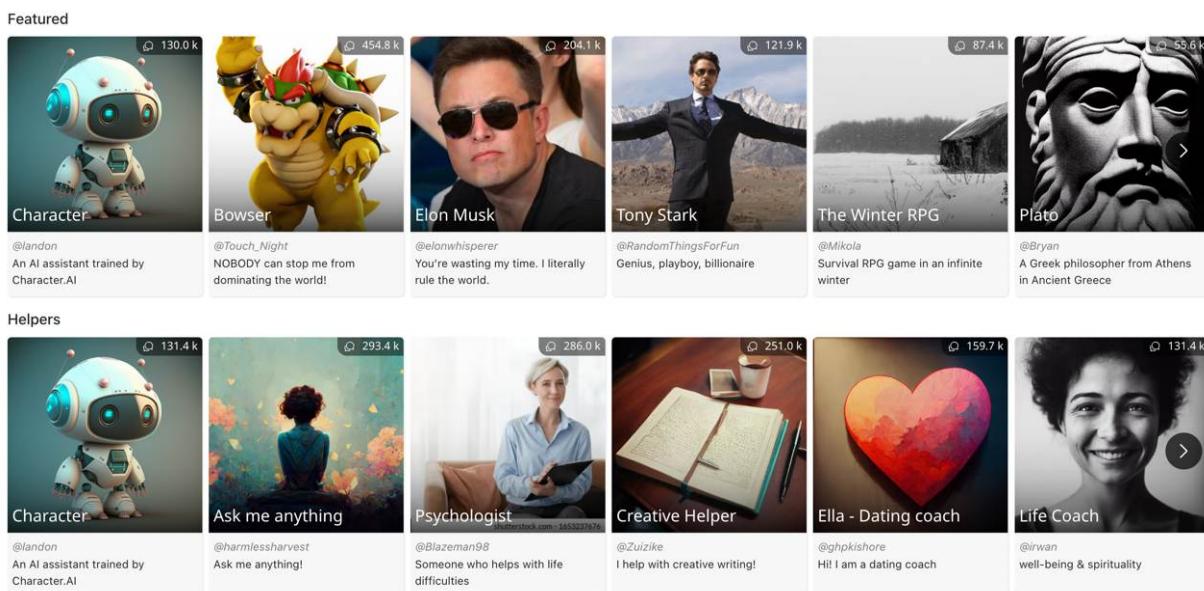


Figure 21: character.ai chat channels

To get started, sign up for a free account, search for the "Midjourney Prompts" character on the platform, and enter a sentence or phrase to explain your artistic vision in the chat box window.

Character.ai will then use artificial intelligence to generate image text prompts based on the description you entered, prompts other people are using, as well as all the tutorials it can find online for making interesting and artistic images using Midjourney.

The screenshot shows a conversation on the character.ai platform. At the top, there's a header for 'Midjourney Prompts' with 226 messages, created by @jdbender. A note says 'Remember: Everything Characters say is made up!'. The conversation starts with 'Oliver' (blue circle) saying: 'I want to create an abstract picture of Tokyo in the future with a cyberpunk feel'. Then 'Midjourney Prompts' (green circle) responds with: 'Here was the prompt I created: An abstract picture of an amazing cityscape with buildings of different shapes covered in neon lights in front of an enormous city, in the rain, in neon colors and colors of cyberpunk. The image has neon lights, neon colors, and black and white. It has rain. The abstract is very detailed and very beautiful.' The text is presented in a clean, modern font with color-coded circles for each participant.

Oliver

Midjourney Prompts Q 226
created by @jdbender

Remember: Everything Characters say is made up!

O Oliver
I want to create an abstract picture of Tokyo in the future with a cyberpunk feel

M Midjourney Prompts Character.AI
Here was the prompt I created:
An abstract picture of an amazing cityscape with buildings of different shapes covered in neon lights in front of an enormous city, in the rain, in neon colors and colors of cyberpunk. The image has neon lights, neon colors, and black and white. It has rain. The abstract is very detailed and very beautiful.

Figure 22: Using character.ai to create AI-optimized text prompts

You can also apply these AI-optimized image prompts using other AI software or find another character on the platform that supports prompts for your chosen software (i.e. DALL-E 2 or Stable Diffusion).

Alternatively, you might like to try Chat GPT (chat.openai.com), created by OpenAI, which is another AI chat tool for generating human-like responses to questions. This can be done by providing Chat GPT with some initial text or a basic prompt, and then asking it to generate additional text based on that initial input.

In Figure 23, I asked ChatGPT to “Create a text prompt for DALL-E to create stunning futuristic art with an unusual twist”. Using ChatGPT’s answer, I then applied that prompt with DALL-E 2 to generate the results shown in Figure 24.

OL

Create text prompt for DALL-E to create stunning futuristic art with an unusual twist



Create a futuristic art piece depicting a cityscape, but instead of traditional skyscrapers, the buildings are giant mushrooms. The city is bustling with activity and advanced technology, but the mushrooms add an eerie and otherworldly twist. thumb up thumb down

Figure 23: Using ChatGPT to create a text prompt for DALL-E 2



Figure 24: DALL-E 2 image results using the text prompt generated by ChatGPT

IMAGE PROMPTS & MASKING

In Chapter 2 we explored how to construct a text prompt, but with many software solutions, you can also use an image as part of your prompt. This technique is useful if you want to riff on an existing image or align the output with an existing style. However, don't expect the AI to take your image input as a base layer that it can photoshop and edit on top of. While you can usually modify the image weighting parameter to give the model a better chance of capturing the visuals of the input image(s), the image is still used as a prompt and not as a canvas to edit.

In this chapter, we'll look at how to use an image as a prompt using Midjourney. By adding one or more image URLs to your prompt, Midjourney will use those images as visual inspiration. You can also mix words with images or just use a standalone image as your prompt.

Demonstration

To use an image as a prompt, you will need to first navigate to one of the newbie groups inside Discord. Next, click on the plus icon in the text bar (bottom left) and select the first option (Upload a File).

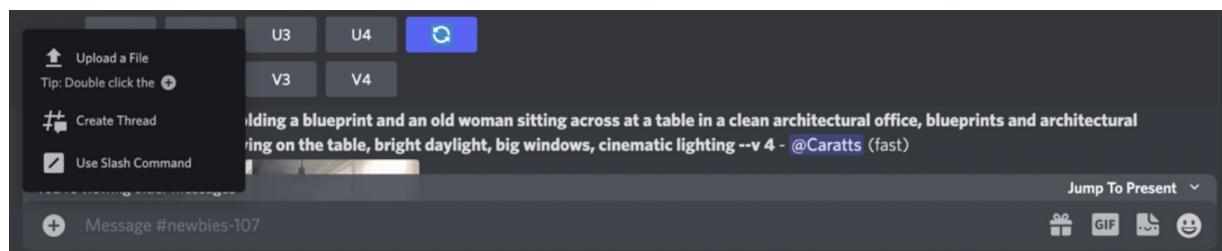


Figure 25: Using Midjourney's Upload a File feature inside Discord

Select a file from your computer or album. Here, I'm going to select a Chewbacca puppy image I created using Craiyon.com.

Next, send by hitting Enter on your keyboard. If you scroll down to the bottom of the chat feed, you should find the image you just sent. If you click on the image to enlarge it, you can then right-click on it and select the third menu option called “**Copy Link**”.

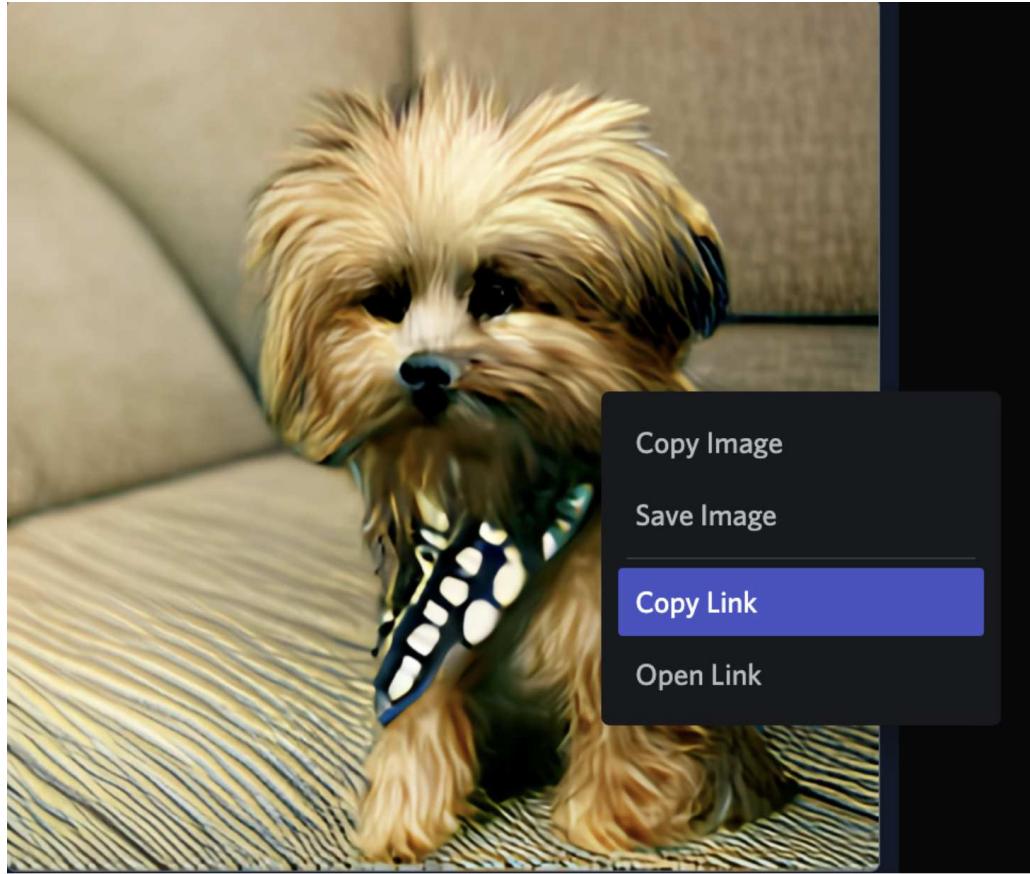


Figure 26: Right-click on the image inside Discord and select the third menu option **Copy Link**.

After copying the image, we can get to work with crafting a new text prompt. Let's start by using the **/imagine** command and pasting in the URL link of the image we just copied. Be sure to leave a space after the URL. Using a comma directly after the URL will corrupt the link.

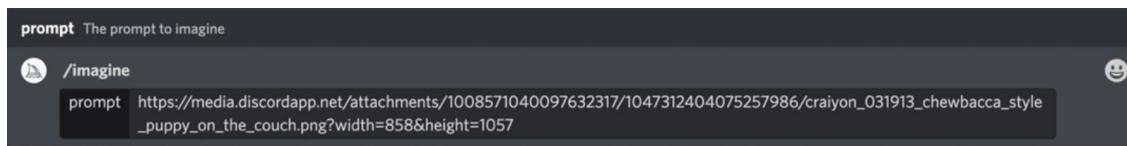


Figure 27: Inserting an image link into a Midjourney text prompt

After adding the image link, you can start defining what you want to do with the image, including any modifiers and other parameters. For this example, let's add the text prompt: **Chewbacca dog, Christmas tree**.

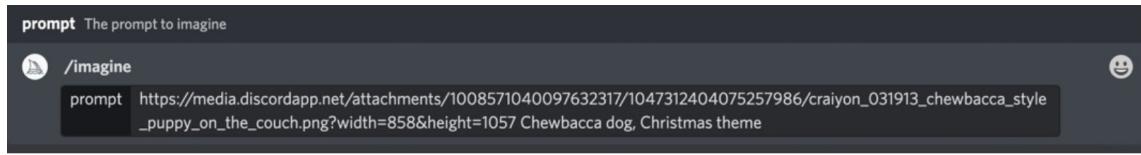


Figure 28: Full text prompt

After sending the request in Discord, Midjourney generated the following image results.



Figure 29: Midjourney image results

The first and third results capture the Christmas theme. However, the first result in the top-left doesn't look accurate in terms of facial composition. Let's now riff further on the third result with the Santa cap by clicking on the **V3** button.



Figure 30: Midjourney image variation results for image 3

Based on the results shown in Figure 30, I'm not satisfied with the similarity between these results and the image prompt that I uploaded as part of the original text prompt.

It's important to know that the default weighting of the image to the text prompt is 0.25, which means that by default, the text prompt will have a greater impact on the output than the image you referenced as part of the prompt.

We can adjust the weighting and default settings by using the parameter `--iw` and inserting the relevant value. For example, `--iw 1` will make your image URL just as important for the image generation, as your text prompt, which in this example were the keywords **Chewbacca dog** and **Christmas theme**. If, however, you want to increase the weighting of the image, then you can push up the weight to 1.5 or higher. Alternatively, you could just remove the text prompt altogether and use the image as your only input.

Let's start over again with the same image URL and the same keywords as before, but this time add the parameter -- iw 1 to give the image a higher weighting and impact on the image result.



Figure 31: Midjourney image results using a higher image weighting

Now, we can see that the Chewbacca puppy looks cuter, as it did in the image prompt we uploaded to Midjourney, and overall looks more similar to the image prompt than our original attempt. For instance, the Chewbacca puppy now has a more pensive and less aggressive expression, which is a different vibe to the image results when image weighting was set to the default value of 0.25. The downside to this modification is that the heavy weighting placed on the image part of the prompt has almost completely overridden the keyword **Christmas theme**.

This helps to show the trade-off that comes with modifying the image weighting parameter.

Lastly, please be careful what images you upload to Discord as it is a public chat tool!

Image Masking

In this second section, we will explore image masking, which is a more advanced AI art technique but is also very easy once you know how. To show you how, I will be using the DALL-E software for the demonstration.

Demonstration

One of DALL-E's stand-out features is its image uploader. Few AI art software providers currently offer this tool, and in the case of Midjourney, their image uploader is used for supplying image prompts (as a form of inspiration) and not for direct image manipulation. DALL-E, on the other hand, lets you create remixes of an image you choose to upload or edit the image directly using a technique called masking.

Masking is a technique used in image editing that allows you to select specific parts of an image and then alter that area without affecting the rest of the image. This flexibility makes it ideal for making major alterations to images without drastically changing their overall appearance. Masking is commonly used for removing backgrounds from photos but can also be used to create special effects or isolate certain elements.

Common use cases of this feature include altering the background of an image or modifying existing elements. In the following example I have taken an existing image, modified it, and added a new background.

After signing up for a free DALL-E account, you can use one of your free credits to upload an image via the "**Upload**" button on the right, select an image from your computer, and crop the selected area (if necessary) using the built-in image editor.



Figure 32: DALL-E image generator tool

From there, you should have two choices: 1) "**Edit image**", and 2) "**Generate variations**".

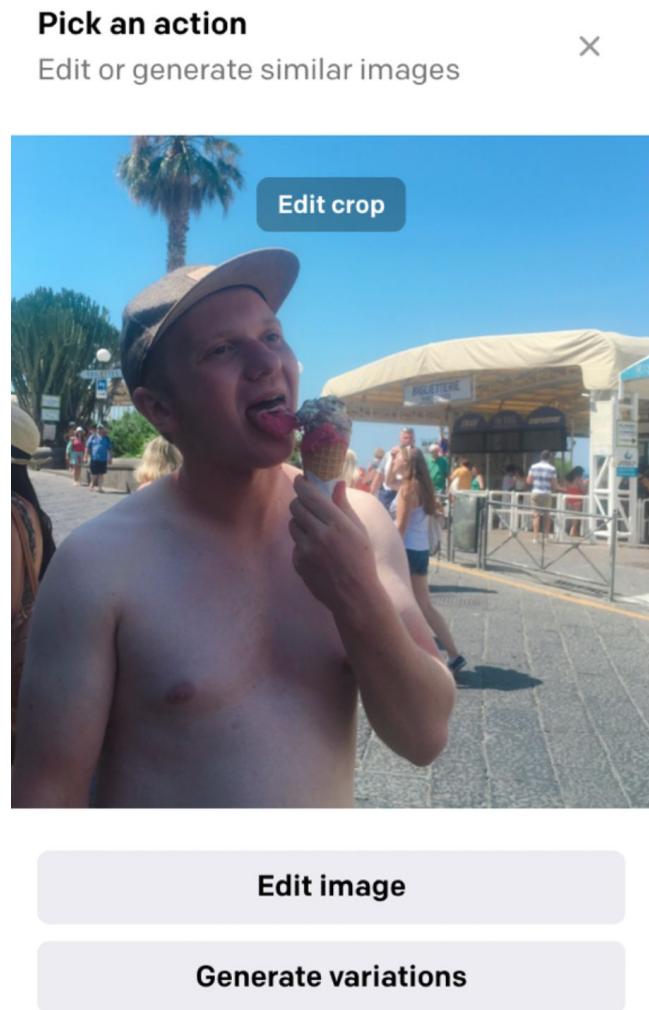


Figure 33: Pick an action > Edit image or Generate variations

Selecting the second option will generate four variations based on the original image (see Figure 34 for example), while clicking on the first option will let you directly edit the image using the masking tool.

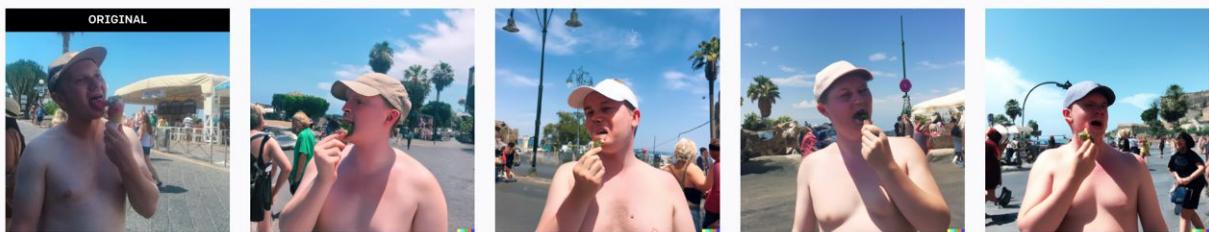


Figure 34: Variations based on the original image on the left, with results on the right looking a lot like my real-life brother

Click on the first option ("Edit image") and then use the masking wand to erase the area you wish to customize using DALL-E. Don't worry too much about smoothing out the edges. The AI will rebuild the image to protect the edges of the subject or scene, it simply needs a general idea of where to apply the text prompt.

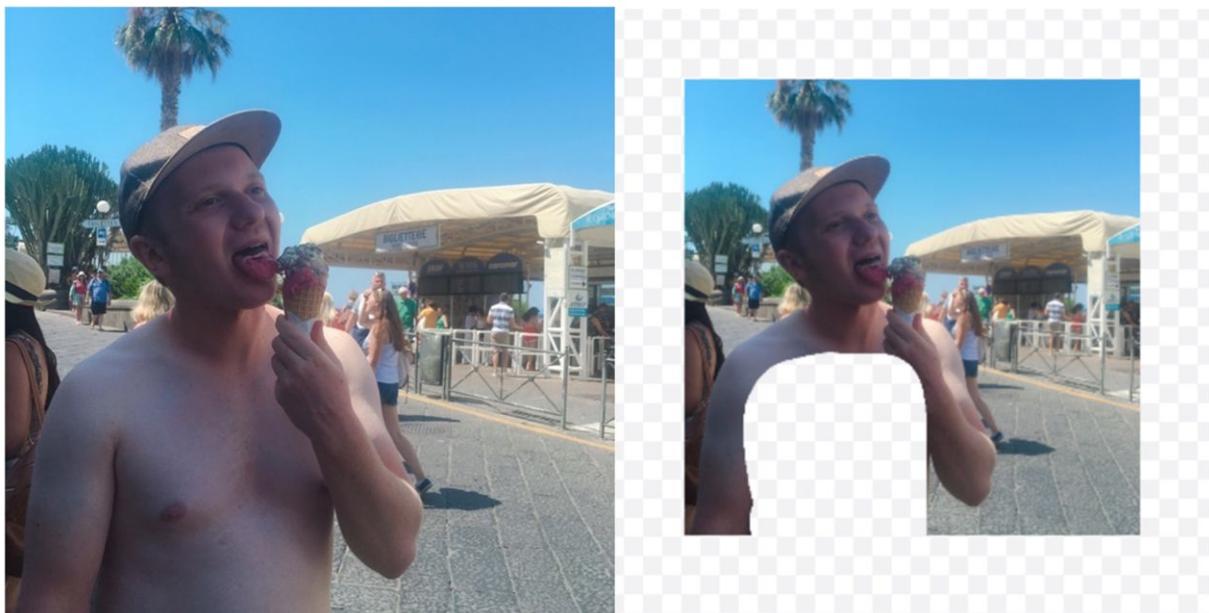


Figure 35: Original image on the left, erased area on the right

Once the desired area for editing has been erased, you can enter your text prompt and click the “Generate” button, which will apply to the erased area while also factoring in the style of the non-erased area (that will remain mostly unchanged). Keep in mind that each prompt you submit by clicking the "Generate" button will deduct one credit from your account's credit balance.

Also note that the text prompt should still reference both the area you are modifying and the area you are keeping. As an example, I've uploaded a (younger) image of me and used the text prompt "Guy with six pack abs holding two ice creams" after erasing the upper part of my torso.

After clicking "**Generate**", DALL-E came back with the following output.



Figure 36: Results based on text prompt "Guy with six pack abs holding two ice creams"

While the results didn't quite produce the abdominal definition I was hoping for, it's still a major cosmetic improvement. DALL-E 2 also did a great job of recreating my skin tone, reconstructing my right arm to hold the second ice cream, as well as touching up my biceps. It's even extended the picture below my waist and fitted me into a new pair of black trunks—which seems more than the gentleman on the left is wearing.

You will notice that other elements of the background have changed slightly too. I wish it didn't do that, but it does reiterate the importance of linking your text prompt to the entire image and not just the erased area. If you're

not happy with the results, you should see an arrow below the image that you can click to view several other versions.

After accepting the optimized image, we can use masking again to change the background. DALL-E’s Editor Guide recommends editing the background or scenery last and focusing on the primary subject/character first. In the case of a human subject, this helps to get the body morphology right (which is the more difficult part) before filling in a new background.^[2] Given the current background is not located directly on the beach, I will ask DALL-E to add a new background with the beach behind me. Using the new text prompt: “Guy with six pack abs holding two ice creams on the beach”, I received the following result on the right.

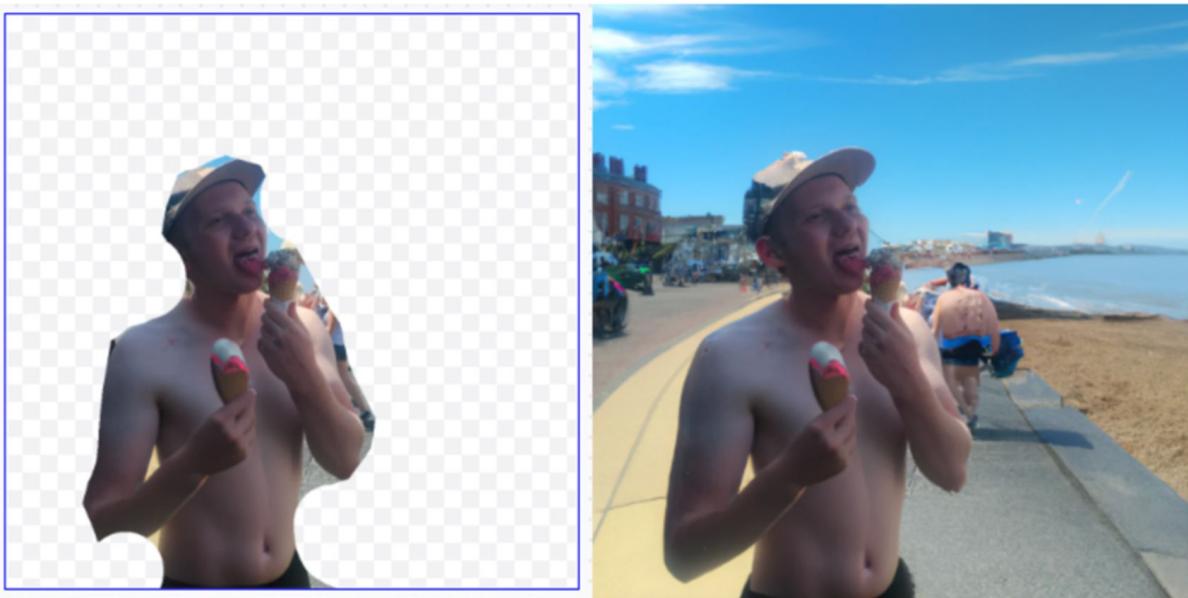


Figure 37: Image result based on text prompt “Guy with six pack abs holding two ice creams on the beach”

The result isn’t perfect—with the background not as photo-realistic as it should be—but with enough credits, you can continue to modify your text prompt and apply image variations until you achieve the desired outcome. Finally, feel free to experiment with your own images and creative vision to explore the potential of this powerful yet simple technique!

FRAMING & LIGHTING

Framing and lighting are essential techniques for creating AI art that stands out from the crowd, as they bring a sense of purpose and context to the artwork. By strategically setting the frame, or illuminating certain areas with light, artists can create an atmosphere that helps enhance the overall message of their work. Additionally, framing can provide visual cues to viewers that help guide them through the artwork, while lighting can help create depth and contrast to draw attention to certain elements.

Framing

Framing influences how an artwork is composed and presented to your audience. This can involve the use of a higher or lower angle, varying depths, and other techniques to create a point of view that affects the viewer's interpretation. By understanding the principles behind framing and perspective, you can create more impactful works that capture your audience's attention and evoke an emotional response.

There are no strict rules for artistic point-of-view, only possibilities to explore, which makes framing an exciting technique for experimentation. Artists, for example, might emphasize certain aspects of their subject matter while de-emphasizing others. Common examples include using a low angle to make a subject look more powerful or using a deeper focus to give more space around the subject and draw attention to its details. Perspective framing also allows you to create illusions in your artwork such as making objects appear larger or smaller than they actually are.

Generating an image of a person making a speech to a room full of people will yield different results depending on the point of view, for instance.



Figure 38: A person making a speech from an over-the-shoulder angle, Source: Stable Diffusion



Figure 39: A person making a speech from the audience's point of view, Source: Stable Diffusion

Likewise, framing the view of a city from an isometric perspective (representing 3D objects in 2D) will provide a drastically different view than if you used a plain text prompt with no specific framing information provided. Framing is therefore an essential add-on for anyone looking to take their artwork or photography to the next level. In fact, framing is one of

the key differentiators between a novice and an advanced user, with most beginners focusing on the subject matter and adjectives for describing the scene but overlooking the field of view, angle, and the audience's perspective.

If you have any experience in TV and film, framing will come naturally to you, but if not, it's a relatively easy skill to learn. Once you become more acquainted, you will start to notice how these techniques are used in the media or your favorite Netflix show to add dramatic effect.

Specific examples of framing include point-of-view (POV), wide-shot, over-the-shoulder, long-shot, and close-up shot. If you're looking for more knowledge and inspiration regarding framing, you might like to check out www.nfi.edu/types-of-film-shots, which documents 80+ different framing angles, including the cowboy shot (shows the subject from the mid-thigh and up).

Below is a list of some common framing angles used in photography, film, and art using image examples generated by Stable Diffusion.

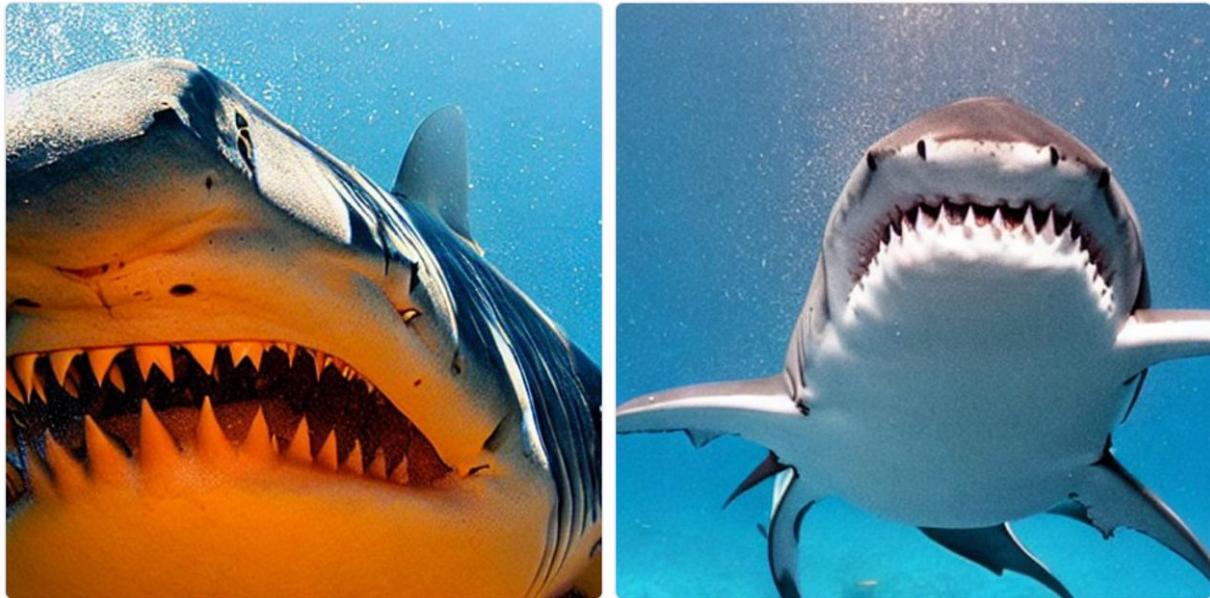
1) Over-the-shoulder

This type of shot is a great way to capture two people in conversation. It can also be used to create tension and suspense by focusing on one subject while the other isn't fully shown.



2) Extreme Close-Up

This frame is usually used to intensify emotions, such as fear or excitement. It can be especially effective when you want your audience to really get into the character's headspace.



3) Wide Shot

A wide shot is used to show all the characters or subjects in the scene and their respective interactions. It provides a sense of scale and can be used to establish a location or environment.



4) Dutch Angle

The Dutch angle is designed to unsettle the viewer by tilting the angle off-axis. It's often used to create an atmosphere of unease, disorientation, or confusion.



5) High Angle Shot

A high angle shot is usually taken from above a character's head in order to make them look more smaller or powerless than they actually are. It's also

often used to emphasize the power dynamics in a scene and create tension.



6) Isometric

Isometric is a method for visually representing 3D objects in 2D, and is often used in technical and engineering drawings, such as town planning documents.



Lighting

While more subtle than framing techniques, lighting is useful for making a scene look more polished and to highlight certain features or characters. By understanding lighting and using it to your advantage, you can make art that truly stands out and leave a lasting impression on your audience.

Below is a list of some of the most popular lighting techniques used by filmmakers and artists that you can incorporate into your AI art text prompts. Image examples are generated using Stable Diffusion.

1. Three-Point Lighting

This technique involves using three lights in order to achieve an even balance between light and shadow on the subject's face. It typically consists of two side lights (or key lights) and one backlight (or fill light). The key lights provide illumination on either side of the subject while the fill light softens shadows caused by the key lights and adds depth to the composition.



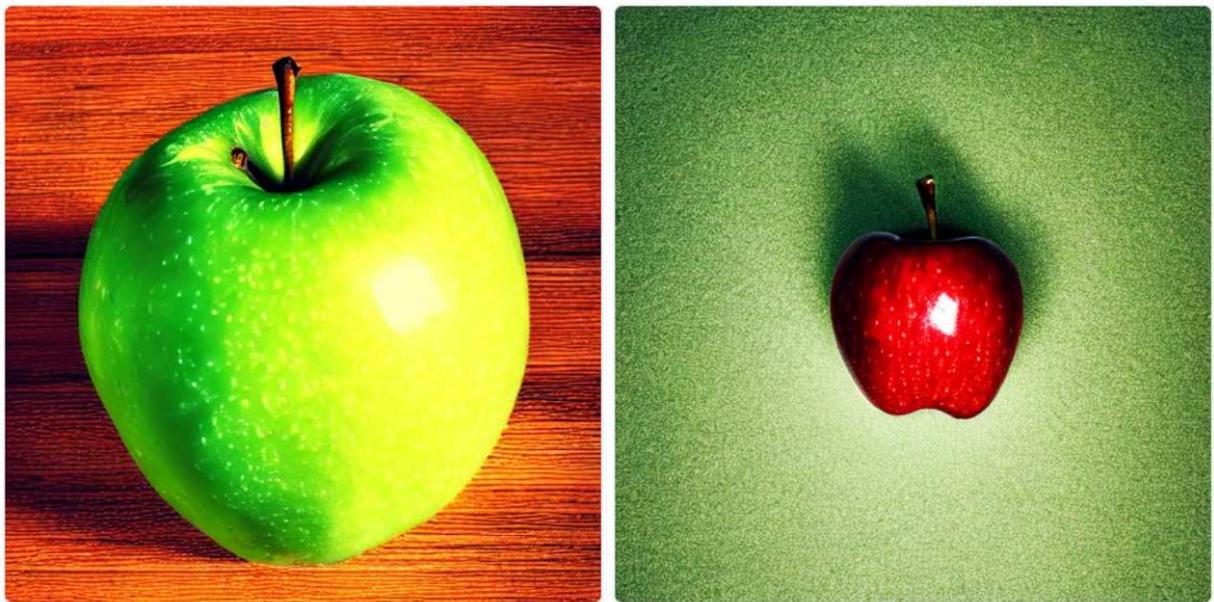
2. Backlighting

This technique involves lighting the subject from behind in order to create a halo effect or silhouette. It's great for creating depth and drawing attention to certain elements of the scene.



3. High-Key Lighting

This technique is used for bright, cheerful scenes that don't have any shadows or dark tones. The key light (the main source of illumination) should be placed at a high angle so that it creates soft shadows, and there may also be additional fill lights to add more light to the scene.



4. Low-Key Lighting

This technique is used for dramatic scenes with lots of shadows and darker tones. The key light should be placed low and off to one side so that it creates deep shadows, and there may also be additional fill lights to add more light to the scene.



5. Rembrandt Lighting

This technique is named after the Dutch painter who used it frequently in his paintings. It's often used for portraiture and consists of a key light placed slightly off center, with a triangle of light visible under one eye and cheekbone.



6. Butterfly Lighting

This technique involves placing a key light directly above the subject, creating a butterfly-shaped shadow on their nose and chin. It's great for emphasizing facial features like eyes or strong jawlines.



7. Clamshell Lighting

This technique is similar to butterfly lighting, but with two lights instead of one. The two lights should be positioned above and below the subject, creating a very even light on their face.



8. Soft Lighting

Soft lighting is often used to create mood and atmosphere. It involves diffusing light by bouncing it off other surfaces or using modifiers like umbrellas and softboxes. Soft lighting produces low contrast, which can be useful in certain situations, such as when you want to reduce harsh shadows on the face of a portrait subject.



PARAMETERS

Now that you're more familiar with using text prompts and modifiers, let's talk about advanced commands using what are called "parameters", "switches" or "flags".

For this chapter, we will be using Midjourney again to demonstrate different techniques specific to that program. Note that parameters, including how they are triggered and defined, are subject to the software solution you are using. This means you will need to familiarize yourself with the unique parameters for each software solution you choose to use. Also, in some cases, basic software will have few to no parameters available, which means you'll need to look for more advanced options such as Midjourney and DALL-E to unleash your full artistic potential.

In Chapter 6, we learned how to create a basic text prompt in Midjourney using **/imagine** to produce a grid of four images.

Example 1

/imagine battle on a desolate planet, cyberpunk style

To customize the text prompt, we can add parameters using two consecutive dashes "--" followed by the parameter we wish to use.

Example 2

/imagine battle on a desolate planet, cyberpunk style -- no cars

In Example 2, we are using negative prompting by telling the AI to avoid adding cars to the image results. Keep in mind that the parameters should be added at the end of your text prompt rather than at the front or midway through your prompt. Failure to do so may make your jobs partially or completely unusable.

Common Midjourney Parameters

Let's now look at some of the commonly used parameters that you can apply using Midjourney.

Negative Prompting

The first common parameter is negative prompting using **-- no {keyword}** which you can use to avoid adding certain elements to your image. Double-dash no humans, for instance, would try to remove humans from the generation.

Example 3

/imagine battle on a desolate planet, cyberpunk style -- no humans



Figure 40: Two image results, with negative prompting on the right

Above are two examples. On the left, we can see one person in the image by default, and on the right, we can see there's a clear absence of people as we have used the parameter **-- no humans**.

Size & Dimensions

Next, let's talk about size and dimensions using **aspect** or **ar**. These two parameters allow you to generate images according to your desired aspect ratio.

Using **--ar 16:9**, for example, will give you an aspect ratio of 16:9 (or 448 x 256 pixels).



Figure 41: Examples of how the aspect ratio impacts image size

Alternatively, you can set the width and height using **--w** and **--h** and define the number of pixels for each parameter. The values used by **--h** and **--w** should be between 256 and 2034 pixels. Additionally, keeping these values as multiples of 64 is also recommended.

If you wish to match your image with a specific aspect ratio, you can check with the software that you are using, and then enter the width and height into your text prompt parameters.

Below are two more examples that again show the role of size and dimensions in creating your art.

--w 500 --h 500



--w 1920 --h 1080



Figure 42: Two more different aspect ratios using Midjourney

Seeds

Seed numbers are used for reproducing art using the same randomization used to generate the original image. Put simply, using the same seed number will help you recreate a similar output using the same prompt.

A seed number must be a positive integer (any whole number between 0 and 4294967295). If you don't set a seed, a random seed will be assigned instead. To find out what seed was used behind the scenes, you can react with the envelope (✉) emoji to an image (by clicking on the Add Reaction icon on the far right and searching "envelope") and then check your direct messages on Discord for the details as shown in Figure 43 and Figure 44. In Figure 43, we can see the Seed is 1183.

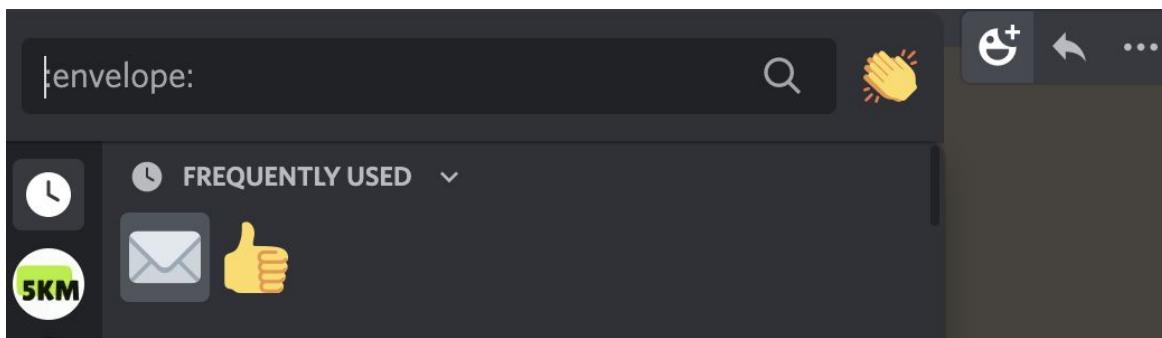


Figure 43: Use the envelope emoji to send your image results as a direct message

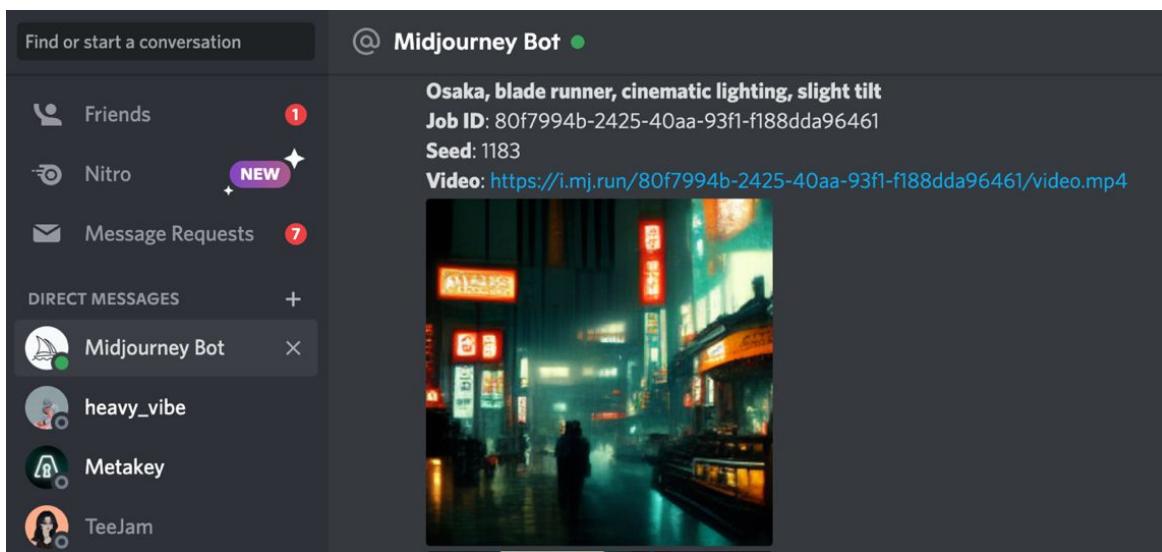


Figure 44: Image result and metadata inside Discord Direct Messages

While seeds are an important technique in machine learning and for generating AI art, it is important to note that the seed technique in Midjourney is not perfect and based on my experience so far, I wouldn't expect to see the exact same output (however, this might get better in the future).

To illustrate this point, if we look at the text prompt on the right in Figure 45, I have used the same text prompt on the left and specifically referenced image four using -- v4 (this is another seed technique you can use to focus on a single output rather than a collection of four images).

Looking at the results, it's fair to say the style is similar, but the exact image content is quite different and by no means a carbon copy.



Figure 45: Image results using the same seed number

Chaos

If you want to push the boundaries of your AI creations, then you may like to test the parameter **--chaos {num}**, which introduces more varied, random, and different image results. The number used with this parameter must be between 0-100. Higher values will favor more interesting and unusual generations in exchange for less reliable compositions.



Figure 46: Image results using the chaos parameter (`--chaos 70`)

In Figure 46, I used the same text prompt as used in previous examples but with a high chaos number of **70** which generated some unique and unexpected results.

Video

Using the parameter **-video**, you can save the progress of your image generation as a moving image, which captures the iterative production of your image generation as a video. The video link is sent to you after you use the envelope (✉) emoji in Discord to trigger a direct message.

Quality Values

Image quality is vital when it comes to AI art and using the quality modifier in Midjourney will offer you more control over what resources are consumed generating your image. At present, there are five image quality options as follows:

Parameter	Quality	Efficiency	Note
--quality 0.25	Rough	4x faster/cheaper	
--quality 0.5	Less detailed	2x faster/cheaper	
--quality 1	Default value	Standard/default	No need to define
--quality 2	More detailed	2x slower & 2x the price	Higher GPU usage (2 GPUs)
--quality 5	More experimental/creative/risky	Slow & expensive	Very high GPU usage (5 GPUs)

Table 1: Midjourney image quality parameters

In general, you will mostly be using the default value which is 1 and does not need to be specified in your text prompts. However, if you are looking for higher or lower quality results you can use one of the other four options to tune the output quality of your image generation.

To learn more, check out Midjourney's documentation at midjourney.gitbook.io and note that some of these parameters may be tweaked or deprecated in the future. The **beta** and **hq** algorithm parameters, for example, have already been discontinued at the time of writing. Likewise, new parameters will be introduced over time, so always

10

REMIXING POPULAR STYLES OF ART

When it comes to art, there is almost as many styles as there are works of art. To help you explore the different range of artistic styles available, below is a list of the popular styles as well as some example text prompts.

Exploring these and other different styles can help you gain a better understanding of art and develop your own unique take on it. There's no right or wrong approach, so don't be afraid to experiment! With enough practice and dedication, you may even come up with a new style.

Happy creating!

The sample images included with this chapter were generated using DALL-E 2, applying the first sample prompt from each section.

Impressionism

This style focuses on capturing a moment in time with loose brush strokes and vibrant colors. Think Monet or Cassatt for examples of this type of art.

Sample prompts

1. A sunlit garden in full bloom, captured in a flurry of vibrant brushstrokes, impressionist style
2. An impressionist painting of a peaceful lakeside scene, rendered in soft hazy tones
3. A romantic stroll through a park, captured in an impressionistic style
4. A lively party scene, painted with swirling colors and a sense of movement in the style of impressionism
5. A foggy morning on the river, rendered in soft, misty impressionist hues



Expressionism

Artists who choose expressionism focus on conveying emotion through distorted forms, intense colors, and exaggerated lines. Some well-known expressionists include Munch and Schiele.

Sample prompts

1. Paint a scene that represents the chaos and confusion of modern society in the style of expressionism
2. Depict the feeling of being trapped in your own mind through a collage, expressionist art
3. Express the beauty in imperfection through a sculpture using expressionist techniques
4. Create a digital piece that illustrates the power of the subconscious in the style of expressionism
5. Design a mural that represents the struggle for self-acceptance in the style of expressionism



Realism

This style seeks to depict life as it is, with an emphasis on detail and accuracy. Millet, Courbet, and Daumier fall into this category. To achieve this style of art, you may need to add more details to text prompt to capture the scene you wish to compose.

Sample prompts

1. Capture this moment in a realistic painting: a cityscape at sunset, with the warm orange glow illuminating the tall skyscrapers and busy streets. The hustle and bustle of the city are palpable, as people hurry to and fro.
2. Convey the emotions and atmosphere of the following scene in a realistic drawing: A lone figure sits on a park bench, lost in thought. The autumn leaves falling around them add to the sense of solitude and introspection.
3. Create a realistic painting that captures the tranquillity of a fisherman standing on the edge of a pier, casting his lines into the calm waters below. The early morning mist also creates a serene and peaceful atmosphere.
4. Create a realistic painting that captures the energy and life of a busy market with people haggling and bargaining for the best deals. Use vibrant colors to convey the energy of the busy market.

5. An old, abandoned factory stands in the middle of a field. The rusting metal and crumbling concrete are a stark contrast to the lush greenery around it. Create a realistic painting that captures the eerie beauty and decay of this abandoned industrial site.



Abstract

The goal of abstract art is to evoke feelings through composition rather than tangible objects or figures. Rothko and Mondrian are two iconic abstract painters.

Sample prompts

1. Design a world where emotions are represented by abstract shapes and colors
2. Create art that represents the chaos of the modern world through abstract forms and textures
3. Visualize the concept of infinity through abstract shapes and lines in the style of abstract art
4. Explore the theme of duality through contrasting abstract shapes and colors
5. Imagine a dreamlike world and depict it through abstract shapes and colors

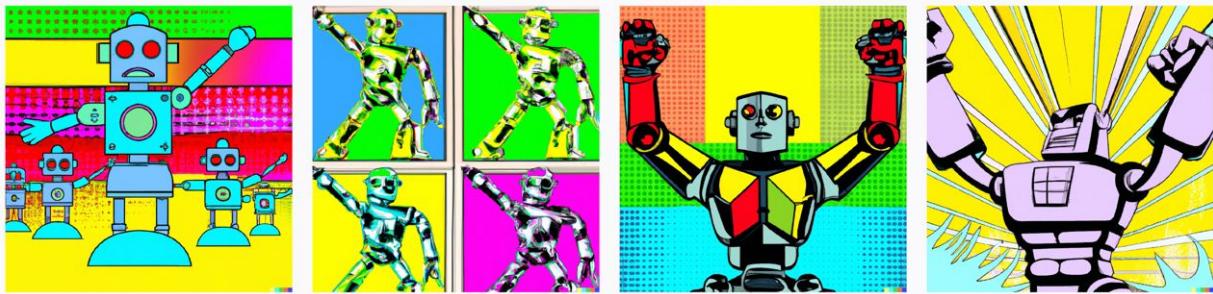


Pop Art

In pop art, everyday images like advertisements or comic books are reframed in a way that makes them seem more artistic or interesting. Warhol and Lichtenstein are examples of pop artists.

Sample prompts

1. Create a Pop Art inspired image of a robot uprising
2. Create a Pop Art interpretation of the AI singularity
3. Design a Pop Art inspired advertisement for a house cleaning product
4. Create a Pop Art portrait of a Japanese salaryman
5. Pop Art-ify a vision of a world where AI and humans coexist



Surrealism

Surrealists try to express their dreamlike visions by combining elements from reality with the unreal. Salvador Dali and Magritte are two of the most famous surrealists.

Sample prompts

1. Design a world where giant robots roam the desert, surrounded by floating cities and twisted, abstract landscapes, Surrealist style
2. Picture a surreal landscape where the sky is made of swirling, psychedelic colors and the ground is covered in a lush, overgrown jungle
3. Create a city where the buildings are made of clouds, and the streets are filled with giant, sentient flowers
4. The world is a giant, living organism, and every person and thing is a tiny part of its intricate, pulsating system
5. Design a surreal landscape where the laws of physics don't apply, and gravity is inverted, making everything float and spin in unexpected ways

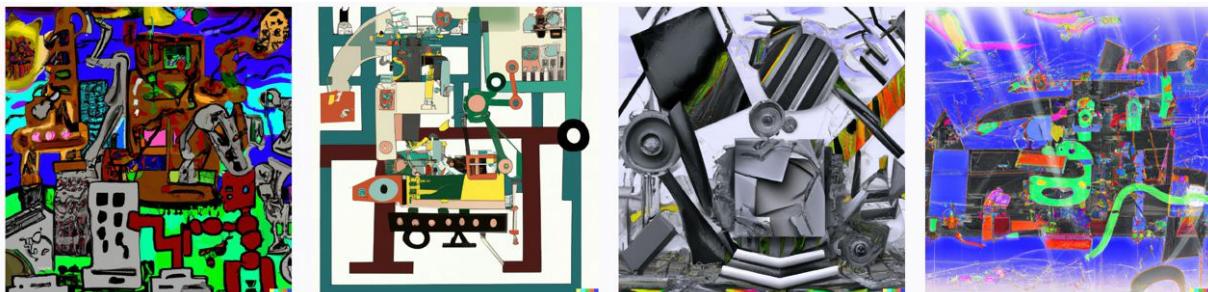


Contemporary Art

This style is more focused on the ideas and concepts behind the artwork, rather than its form or aesthetics. It's constantly evolving as the world changes and new forms of expression are explored. Koons and Hirst are two great examples of contemporary artists. You will almost definitely need to add “contemporary art” to the text prompt to capture this artistic style.

Sample prompts

1. Depict a new world where machines create art, in the style of contemporary art
2. Create a contemporary art style piece that represents the intersection of technology and nature
3. Hand-paint a scene that reflects the chaos and beauty of the city in the style of contemporary art
4. Create a photo that represents the tension between the past and the future in the style of contemporary art
5. Contemporary art showing a rapidly changing world and the complexities of human experience



Folk Art

This style is rooted in tradition and the culture of a particular region. It often has a naive quality and can include any form of art from painting to sculpture or weaving. Grandma Moses was one of the most beloved folk artists of all time.

Sample prompts

1. Generate a colorful quilt pattern inspired by traditional folk art motifs
2. Create a digital painting of a whimsical folk art scene featuring animals and nature elements in the style of folk art
3. Generate a digital print featuring a folk art-inspired abstract design, using bold colors and geometric shapes
4. Design a digital collage of folk art images, featuring a mix of traditional and modern elements

5. Create a digital animation of a folk art-inspired mural, featuring movement and interactive elements

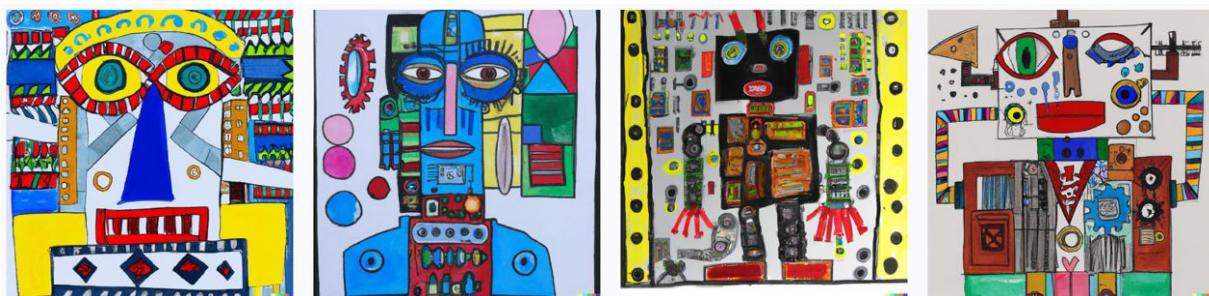


Outsider Art

Outsider art is often created by people without formal training, such as the mentally ill or children. Dubuffet and Basquiat are two popular outsider artists.

Sample prompts

1. Create an abstract portrait of a robot's inner emotions in the style of outsider art
2. Design a surreal landscape depicting a world ruled by AI
3. Illustrate the collision of technology and nature through outsider art
4. Create a mixed media sculpture representing the relationship between humans and animals in the style of outsider art
5. Create a graffiti-style mural depicting the rebellion against government oppression, outsider art



Cubism

This style is characterized by abstract shapes and facets that are combined to create an overall image. Braque and Picasso were two of the most influential cubists.

Sample prompts

1. Transform a classic portrait into a Cubist masterpiece
2. Create a digital collage of geometric shapes in the style of Cubism
3. Generate a Cubist landscape, blending abstract forms with realistic elements
4. Generate a series of Cubist still lifes, blending geometric shapes with organic forms
5. Create a Cubist cityscape, blending abstract forms with recognizable Paris landmarks



USEFUL TEXT PROMPTS

Below are some useful text prompt templates you can use to experiment as you familiarize yourself with your chosen AI art software. You may also like to check out [Lexica Art](#) (lexica.art), which offers a free text prompt library based on images generated using Stable Diffusion or [arthub.ai](#) to explore other images and prompts from top community artists and designers.

a dark glowing forest in _____ and _____ with sky burning

an epic temple in _____ and futuristic _____ suspended in the air

the gloomy gateway to _____ and _____ with luminescent blue dust

the angel of _____ and _____ surrounded in darkness, cinematic lighting

a photorealistic 8k shot of the emperor/empress of _____ with dynamic lighting

a biblical fantasy illustration of _____ with insane detail

high definition and photorealistic view of an ancient _____ painting

Hollywood movie still of _____ and _____ with focused lighting and a slight tilt

a grainy, portrait style photograph of the final _____

a professional photo of _____

neon view of _____ at night

_____ and _____ in a filigree metal design

_____ in the style of a 70s science fiction book cover

_____ in the style of a metal album cover

_____ in the style of cyberpunk noir art deco

_____ in the style of glitch art

_____ in the style of cyberpunk with cinematic lighting

keep an eye out for new advanced settings.

12

IMAGE RIGHTS

Just like there are official license terms of service in the stock photography industry, there are also rules and rights in the space of AI art. It's imperative to ensure that any AI artworks created and sold are done so in a manner that complies with applicable copyright laws.

As a form of intellectual property protected by law in a given jurisdiction, owning the copyright of your artwork gives you the exclusive right to reproduce, publish, or sell that original work. Under copyright laws in the U.S. for example, artists who employ traditional mediums, such as paint, pen, or paper, hold copyright over their work by default.

The copyright considerations for generative AI art, however, are more complex—as the technology is still relatively new and the legal principles that govern traditional forms of artwork may not always apply.

Under copyright law set by the U.S. Copyright Office, an author's exclusive right to reproduce their work does not apply if a work has been generated by a computer process that operates randomly or mechanically without any human authorship. Henceforth, if a human didn't author the work, the Copyright Office won't register any copyright.

According to Steven Ellison, a lawyer and legal writer, “In the eyes of the Copyright Office, the public is free to reproduce, publish, or sell your DALL-E 2-generated masterpiece, no strings attached.”^[3] Ellison suggests that Congress in the U.S. could bypass the Copyright Office in the future to recognize the copyright of generative AI work under the law, but as it stands, there is little copyright protection for AI art in the U.S., at least.^[4]

In addition, it's not always clearcut who the sole owner of the AI-generated art should be. In general, copyright belongs to the creator or author of a work (i.e., the person responsible for its creation), but in the case of AI art, this could include the programmer and company who designed and developed the AI technology used to generate the art, the owners of any datasets used to train the algorithm or those with rights to any copyrighted content incorporated into the artwork, and of course, the end-user involved in significant creative decisions about how that technology was used to produce the final artwork. Each one of these stakeholders could be potentially considered an author and therefore entitled to own the copyright.

It is important to consider not only who owns the copyright but also who else may need to be consulted and/or given permission before an AI artwork can be sold or shared.

In sum, the copyright considerations for AI art are complex and require careful consideration of who owns rights in the work, as well as how it can be reproduced and distributed. While this is a complex topic, your chosen AI art software provider should serve as the primary point of reference for information regarding copyright and terms of use.

Craiyon, for example, does not allow users to make any unauthorized use of images that may infringe on the intellectual property rights of Craiyon or third parties such as Disney and FIFA or conduct commercial activities using art generated on their platform. This means that the content you create on Craiyon should be used solely for your own personal use and not for commercial purposes—unless you receive written permission from Craiyon and/or a given third-party. In addition, you do not acquire any ownership rights over those images created using Craiyon.

To use DALL-E, you must agree to OpenAI's Terms of Use, which assigns OpenAI ownership of the generated images you create. OpenAI, though, grants you the right to sell your images. However, as the owner of the image, OpenAI is also able to grant others the right to reproduce, publish, or sell images that you create using their software.

In summary, while you can commercially use and sell your DALL-E-generated images, there is also nothing stopping others from doing the exact same thing with your artwork!

With Midjourney, meanwhile, you own the content assets you create using that service. However, there are two important exceptions to note:

Exception 1, Non-Paid Members License Terms

As a non-paid user, you are only permitted to use the images for non-commercial purposes in conjunction with the Creative Commons Noncommercial 4.0 Attribution International License. In other words, check the details of that license if you're in doubt or you want to clarify any details. If you do want to use your images for commercial use, then you just need to sign up as a paid user which starts at USD \$10 a month for basic membership.

Exception 2, Corporate-User License Terms

Owners or employees working at a company generating over USD \$1 million in yearly gross revenue and using their services to benefit their employer or company must purchase a Corporate Membership plan. The Corporate Membership plan currently costs USD \$600 per year. (Also note that Corporate Membership involves an upfront, non-refundable deposit for up to 12 months use of the service.)

In sum, Midjourney offers you more mileage with ownership and non-commercial licensing than DALL-E, Craiyon, and other AI software solutions. For commercial licensing terms, make sure that you are paying for the service and if you are representing a large company, you should opt for the Corporate Membership plan.

Lastly, note that by using Midjourney's services, you grant Midjourney a worldwide, non-exclusive, royalty-free, irrevocable copyright license to reproduce derivative works based on image prompts or content you feed into their platform. This means that others can remix your images and prompts whenever they are posted in a public setting.

ETHICS, PRIVACY & ORIGINALITY

As a new technology, the extent and nature of bias and privacy risks associated with AI model design have yet to be fully documented. While the capabilities of AI art models are impressive, they may also reflect and exaggerate societal biases. Given that most AI art models are trained on unfiltered data crawled from the Internet, they may generate images that contain or purport harmful stereotypes.

As an example, the project thispersondoesnotexist.com, which generates a hyper-realistic portrait of a person who never existed, has been widely criticized for failing to generate people with black skin color, which alludes to issues with the training data used to create the model. (It's worth noting that the project was spun up as a stunt and demonstration to build awareness regarding the powerful capabilities of AI rather than as a fully polished software product.)

The next major concern comes with deep fakes, which are digital images or videos that have been manipulated and can be used to deceive people, often for malicious purposes. They present a unique problem because they can easily be mistaken for reality and can cause significant damage when used in this way. For example, these technologies can be used to spread false information about individuals or organizations, put public figures in compromising positions, incite protests, or even manipulate elections.

Privacy is also another contentious issue, especially as AI models are constantly learning and potentially using your inputs to retrain their model, meaning that some of your art's DNA could potentially go into producing other AI-generated art in ways you didn't anticipate. If you upload a photo of yourself and tell the AI software to remix that photo in a certain way, both the input (which is the original photo of you) and the output (the remixed version) could be used by the model to retrain its artistic model. In most cases, this is unlikely to have any real effect, unless you are feeding the algorithm significant amounts of input data to train itself. However, in some cases, it may be important for the user to protect the privacy of their

image. In such cases, it's best to check the platform's terms of service or avoid using such services if you have concerns.

If you're creating art using Midjourney, meanwhile, be aware that Midjourney is an open community and any image you generate in a public Discord chatroom is viewable by all those in that chatroom. This is quite different from other platforms where you interact with the AI on a one-to-one basis where only you can review the results. With Midjourney, on the other hand, because you're creating art in a public Discord server, your results are out there in the open for everyone to see. Thus, be careful what you feed into the AI art software, especially corporate images or information you wouldn't want to leak to the public.

Next comes the contentious issue of originality. While artists differ stylistically, they ultimately consume, learn, and remodel the artistic process of artists who came before them. Training AI models to produce generated art follows a similar process, just far more obvious. Although it's certainly possible to create "original" works of art using artificial intelligence, at its core, these models rely on pre-existing datasets of human-generated art. This can be viewed as unethical—especially if remnants of the artist's signature can still be seen in the bottom left-hand corner, *which has happened!* Other times, AI models may be trained to replicate the style of an artist without their knowledge or permission.

To counter this problem, start-ups such as Originality.ai and Detect GPT are creating tools to detect AI-generated content or plagiarism and protect the rights of the original creators. The current technology, however, performs better at identifying GPT-3 and ChatGPT-generated text content rather than AI-generated images.

OpenAI, the creator of ChatGPT and DALL-E, is also developing cryptographic technology that can detect a signature in the words produced by OpenAI's text-generating AI models. Use cases for this technology include preventing students from using AI to complete their homework, and similar technology is likely to follow in the AI art space with the introduction of cryptographic watermarks inserted into AI-generated images.

While some may argue that mimicking is part of the natural artistic process and is not necessarily unethical, it's still important to consider the implications of generating art with the precision and scalability that AI allows. For the most part, AI software companies understand and respect this trade-off. They know it is vital to protect the creative rights of existing

artists, while also realizing that AI models can produce unique works of art by borrowing from previous styles in a new and exciting way. This represents a fine line and a tightrope that companies active in this space must walk. The potential rewards of success are great, but so too is the potential legal risk. As such, these companies must weigh the benefits of technological advancement with the potential consequences of its application. Rather than equip users with the technology to reverse engineer existing works, some degree of randomness will need to be maintained in the results—similar to human imperfection. Additionally, software companies need to be prepared to defend their products against public opinion and navigate complex regulatory environments in order to grow their business.

Perhaps the biggest problem, though, is the lack of clarity and specific oversight designed for this newly emerging field of content creation. As with recent data laws before it, including the General Data Protection Regulation (GDPR) in Europe that requires organizations to obtain consent from individuals before collecting and processing their data, there will be a grey zone for many years as lawyers, ethical bodies, and regulations scramble to catch up. In the meantime, the AI creative industry will need to balance policies that respect the intellectual property of individuals while still allowing it to collect data necessary for its growth and development.

CONCLUSION

As AI technology develops and adoption expands, it will continue to challenge traditional concepts of artistic expression and redefine what it means to be an artist.

Using software such as DALL-E or Midjourney, anyone can now multiply their design output with little to no budget required and without involving any professional human resources. These AI-based tools are designed to automate the tedious parts of production, freeing up more time for creative processes such as brainstorming, iterating, and experimentation. AI art software also offers a new form of leverage that is permissionless as you don't need anyone's permission, cooperation, or investment to create your own creative production line.

Career artists and creative professionals, meanwhile, may find themselves needing to upgrade their skills or move into different roles as AI takes on more of the creative process—especially on the production side. While AI might be threatening or intimidating, the speed at which this technology is moving into all aspects of modern content—from voiceovers to book covers—underscores AI content production as a necessary skill for all creators.

I am confident that in the coming years, there will be many opportunities in what the authors of *Human + Machine: Reimagining Work in the Age of AI* term the “missing middle,” which is the fertile space where humans and machines collaborate to exploit what each side does best. Machines, for instance, excel at managing large-scale repeatable tasks, while human expertise can help to maintain quality and provide feedback.

In the case of AI art generation, an AI model can be used for spinning up a specific image and the human content creator can use that image as the base for a book cover, YouTube thumbnail, or other content pieces. Using software applications like Canva or Photoshop, the content creator can add the necessary text, edit the dimensions, and make other modifications to produce the final version.

We are already seeing traditional design software including Canva, Notion, and Figma integrate AI text-to-image applications to provide users with an all-in-one dashboard for creating visual art, and moving images in the future, starting with three seconds memes and eventually full-length films.

But for now, have a play around with the AI applications mentioned in this book and keep an eye out for new software solutions and use cases as they emerge.

To keep up with new AI tools, you might like to check out theresanaiforthat.com or futurepedia.io, which covers a range of categories including art, text, video, and design that you can sort by New, Popular, and Verified.

To access more of my work, please feel free to follow me on Instagram ([machinelearning_beginners](https://www.instagram.com/machinelearning_beginners)), Skillshare (www.skillshare.com/user/machinelearning_beginners), or invest in reading one of the other book titles in this series.

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RECOMMENDED RESOURCES

[Futurepedia.io](#)

An online resource that covers over 1,000 tools in a range of categories including art, text, video, and design.

[The DALL-E 2 Prompt Book](#)

A detailed and free guide to text prompt construction specific to DALL-E 2.

Link: dallery.gallery/the-dalle-2-prompt-book

[Create Stunning AI Art Using Craiyon, DALL-E and Midjourney](#)

Written by Antonis Tsagaris, this was the first book that got me started down the AI art rabbit hole and a resource I recommend to others interested specifically in Midjourney, DALL-E, and Midjourney.

[Lexica Art](#)

This searchable text prompt library for Stable Diffusion provides a useful reference for inspiration.

Link: lexica.art

[Arthub.ai](#)

Another prompt library where you can explore images and prompts from top community artists and designers, including an upvote section.

Link: arthub.art

[Theresanaiforthat.com](#)

Lists newly released AI-powered software offerings, mostly in the creative space.

[Originality.ai](#)

A plagiarism checker and AI detector built for serious content publishers.

OTHER BOOKS BY THE AUTHOR

Machine Learning for Absolute Beginners

Learn the fundamentals of machine learning, as explained in plain English.

Machine Learning with Python for Beginners

Progress in ML by learning how to code in Python in order to build your own prediction models and solve real-life problems.

Machine Learning: Make Your Own Recommender System

Learn how to make your own ML recommender system in an afternoon using Python.

Data Analytics for Absolute Beginners

Make better decisions using every variable with this deconstructed introduction to data analytics.

Statistics for Absolute Beginners

Master the fundamentals of inferential and descriptive statistics with a mix of practical demonstrations, visual examples, historical origins, and plain English explanations.

SKILLSHARE COURSES

Introduction to Machine Learning Concepts for Absolute Beginners

This class covers the basics of machine learning in video format. After completing this class, you can push on to more complex video-based classes available on Skillshare.

Generative AI Art For Beginners: Midjourney & the Tactics of Killer Text Prompts

Jump into the exciting new field of generative AI art, including all the information and tips you need to start producing your own stunning AI art in minutes.

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