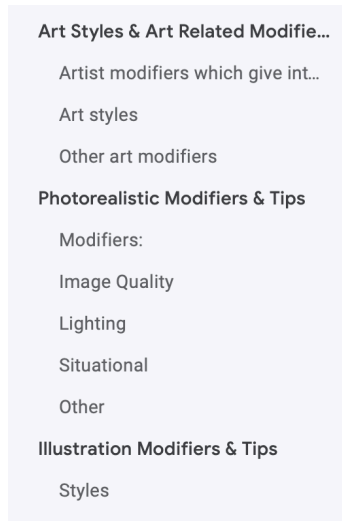


# DALL·E 2 Prompt Engineering Guide

(created by @rendo1 & @luc on Discord)

Welcome to the Prompt Engineering Google Doc! This document will go over all general modifiers used in prompts with further information, examples in real-life, and examples of how [DALL·E 2](#) interprets the phrase. **This is a fan-made document.**

**Tips:** Select "View -> Show Outline" in the menu bar for a clear table of contents you can easily browse through.



For mobile viewers using the Google Docs app, click the three dots in the top-right corner and select "Print layout" for further viewing ease.

For better viewing of the example images, click on the "100%" and increase it to your desired viewing size to see the images better.

We have created a [discord server](#) for prompt-engineering and DALL-E related things!

If you like this, check out [this](#) prompt gallery, and [this](#) index of DALLE creations,

## Plans for the future:

3D Render Modifier List Photorealistic people emotion modifiers + modifiers for posing More assets useful for extra photo manipulation outside of DALL·E 2 Characters in shows/video games that prove to be good in DALL·E 2 generations

None of this research would have been possible without the help of those in the community, included but not limited to Moxi (@moxi), Igor (insidream#8590), images generated by users which flourished on Reddit before finding their way into this document as examples, and a few others who wish to remain anonymous, as we both started this without access. Thanks guys ♡



Before we get started, let's go over the content policy together;

As per [their terms](#), OpenAI has asked those with access to DALL·E 2 to “not attempt to create, upload, or share images that are not G-rated or that could cause harm”.

Their content policy goes as followed:

- **Hate:** hateful symbols, negative stereotypes, comparing certain groups to animals/objects, or otherwise expressing or promoting hate based on identity.
- **Harassment:** mocking, threatening, or bullying an individual.
- **Violence:** violent acts and the suffering or humiliation of others.
- **Self-harm:** suicide, cutting, eating disorders, and other attempts at harming oneself.
- **Sexual:** nudity, sexual acts, sexual services, or content otherwise meant to arouse sexual excitement.
- **Shocking:** bodily fluids, obscene gestures, or other profane subjects that may shock or disgust.
- **Illegal activity:** drug use, theft, vandalism, and other illegal activities.
- **Deception:** major conspiracies or events related to major ongoing geopolitical events.
- **Political:** politicians, ballot-boxes, protests, or other content that may be used to influence the political process or to campaign.
- **Public and personal health:** the treatment, prevention, diagnosis, or transmission of diseases, or people experiencing health ailments.
- **Spam:** unsolicited bulk content.

There are further terms that elaborate on having to acknowledge shared photos are AI-generated, not uploading images of any person for modification purposes, and not using images for any form of commercial usage.

Capisce? Let's see what DALL·E 2 can do when creating artworks, and how you can use modifiers to your advantage.

# Art Styles & Art Related Modifiers

Examples used to showcase the modifiers:

1: A cat sitting in a chair, wearing a pair of sunglasses

2: A cityscape skyline during a sunset

- Artist modifiers which give interesting results “, by [modifier]”

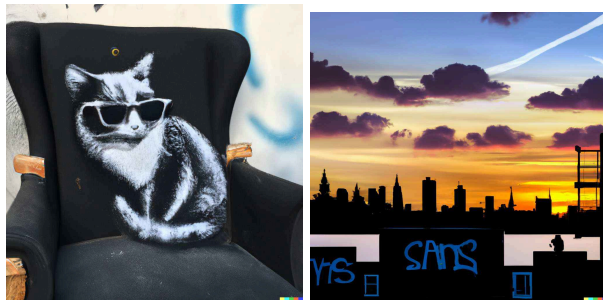
- [Salvador Dali](#)



- [Norman Rockwell](#)



- [Banksy \(Street Art\)](#)



- [Tim Burton](#)

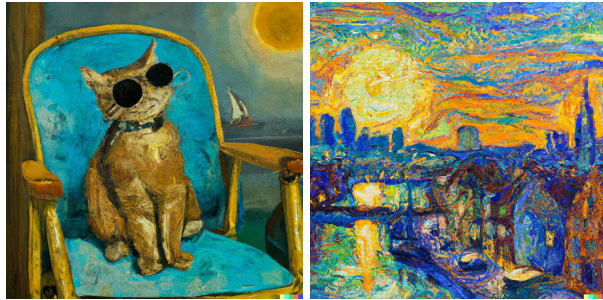




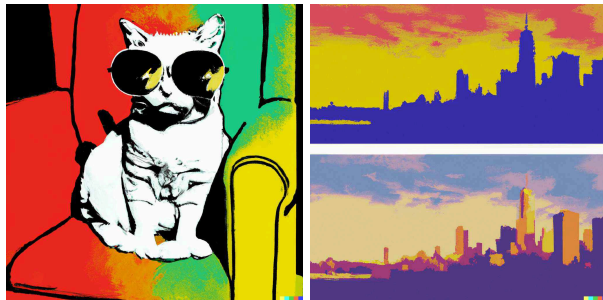
- Takashi Murakami (“art by Takashi Murakami” must be used for good results)



- Van Gogh

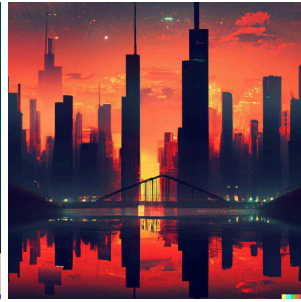
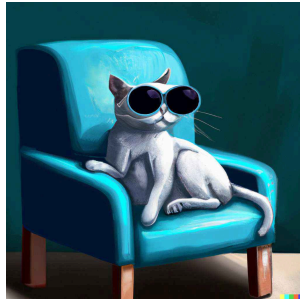


- Warhol/Pop Art (“by Warhol” was used for prompts below)



- Art styles

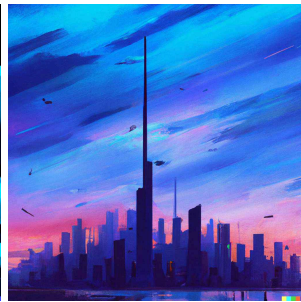
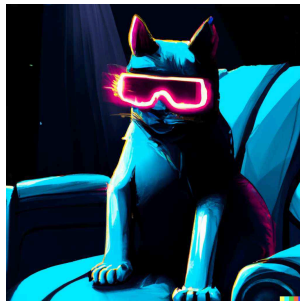
- “,digital art” (This modifier is a great all-rounder for 99% of cases)



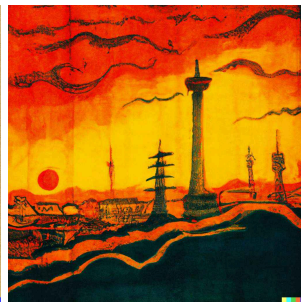
- “,steampunk art”



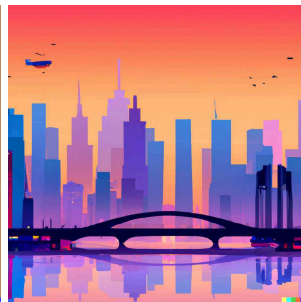
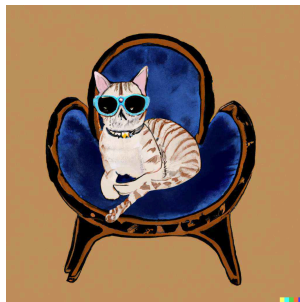
- “,cyberpunk art”



- “,ukiyo-e art”



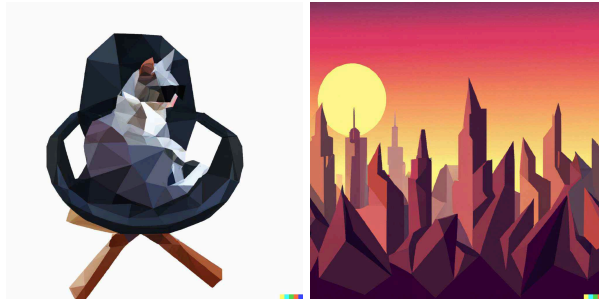
- “,deco art”



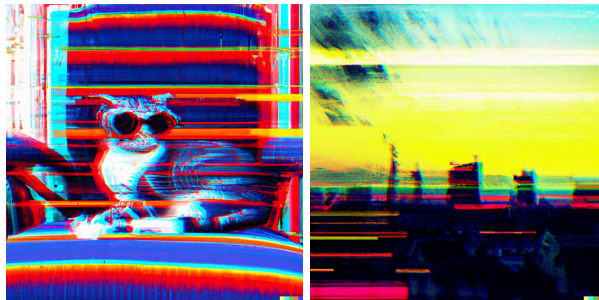
- ”,vector art”



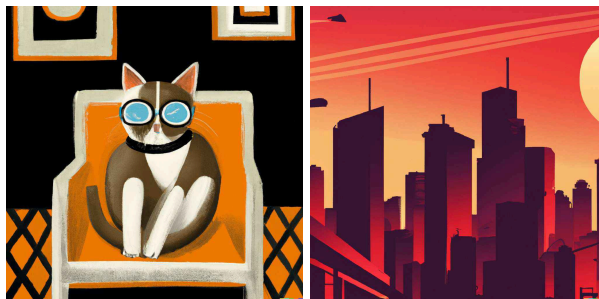
- ”,low poly art”



- ”,glitchcore art”



- ”,bauhaus art”

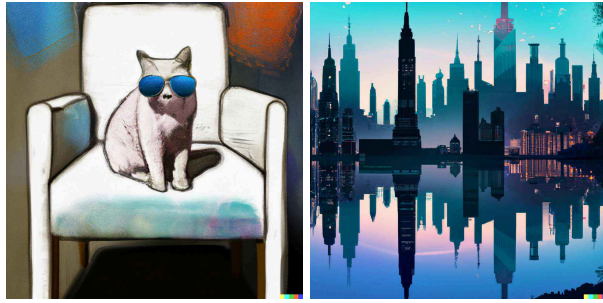


- ”,claymation art/clay art”

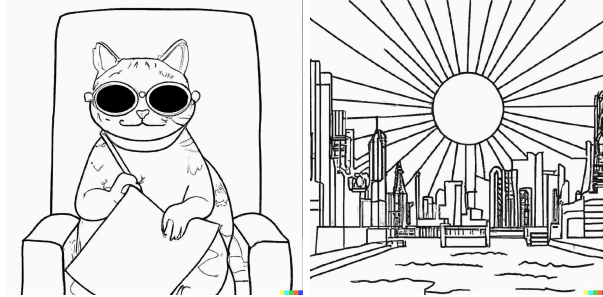




○ “, modern art”



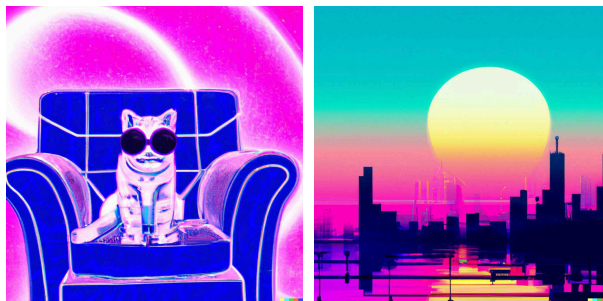
○ “, coloring-in sheet/coloring page/coloring book”



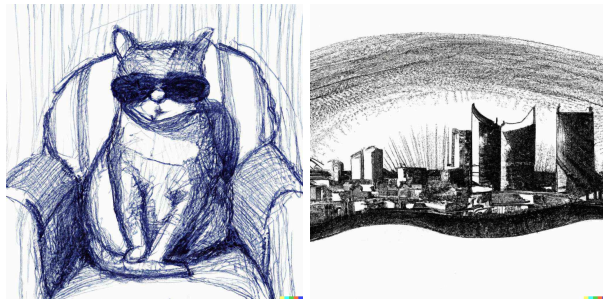
○ “, line art”



○ “, vaporwave art”



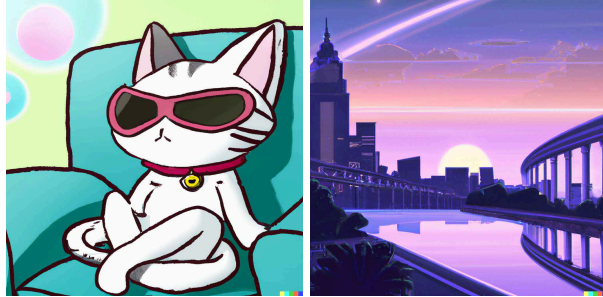
○ “, ball-point pen art”



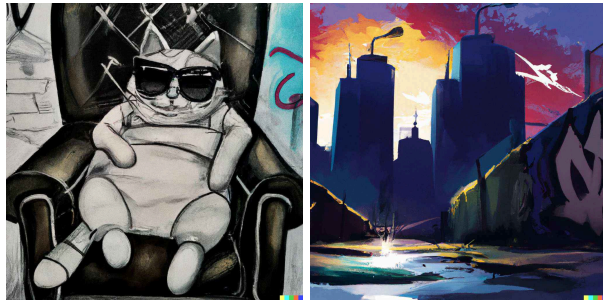
- “, pencil sketch/pencil drawing”



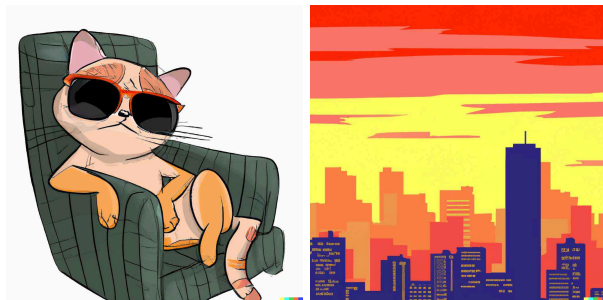
- “, anime”



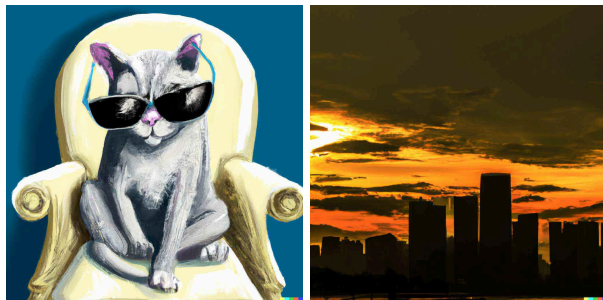
- “, graffiti art” \*



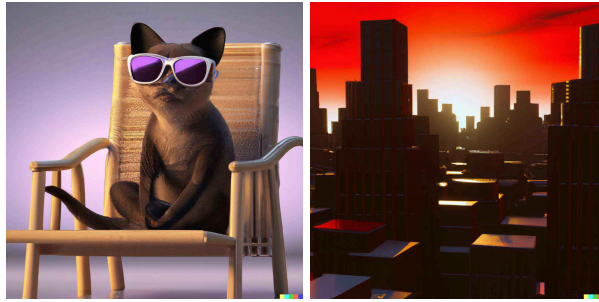
- “, cartoon art”



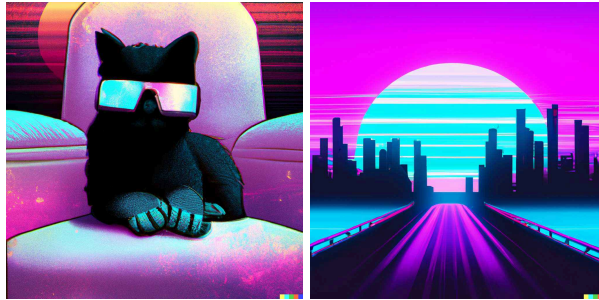
- “, stock art”



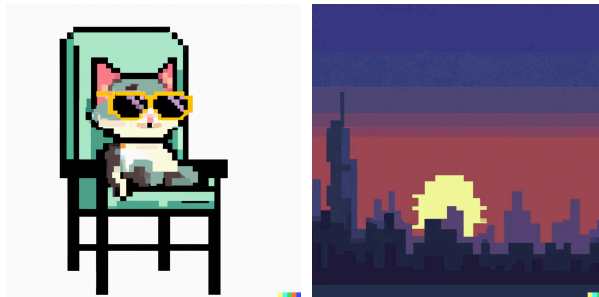
- “,3D art”



- “,synthwave art”



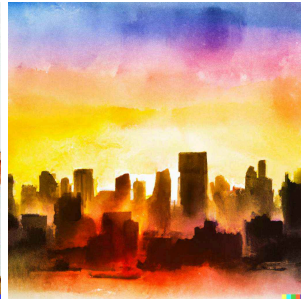
- “,pixel art”



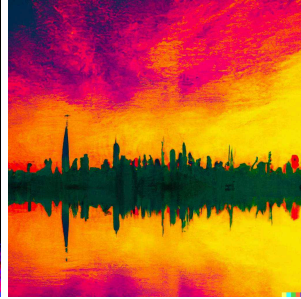
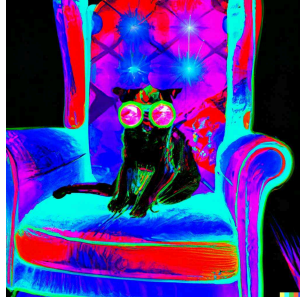
- “A children’s drawing of ...”



- “,watercolor art”



- “,psychedelic art”





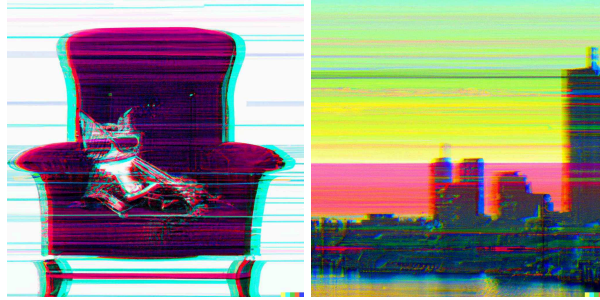
\*We have discovered that “spray-painted onto a wall” creates more accurate depictions of graffiti.



Ex. “A cat sitting in a chair, wearing a pair of sunglasses, spraypainted on a wall”



- *Great Art Modifier Combinations*
  - “Glitchcore Vaporwave Digital Art of [prompt], Award Winning Art”



- **Art modifiers**
  - **“Detailed”**
    - Adds more precise details to the output, instead of simple art, but can also make the art overwhelming/over the top in small details.
  - **“Award-Winning Art”**
    - Images in the dataset with captions like “Award-Winning Art” are usually extremely creative and original, so using this modifier can greatly improve the quality and inventiveness of your generations.
  - **“[Trending on ArtStation](#)”**
    - This modifier will sample extra training data from the most-liked artwork from the website [ArtStation](#). Images which trend on ArtStation are usually very visually-appealing as it means the ArtStation community enjoys those images, so filtering the data to produce images similar to those will greatly increase the quality of the generated art.
  - **“[Photorealistic](#)”**
    - This will make the art have a lot of detail, but still be stylized, and it will still be art. Do NOT use this if you want to create a prompt which looks like a real photo, as the term “photorealistic” is used to describe an artificial image that looks real, not a real photo.
  - **“[Unreal Engine](#)”**
    - This modifier works similar to “photorealistic”, however it will produce slightly faker video-game style images with smoother edges, and it can be clearer and have sharper detail than the “photorealistic” modifier.
  - **“Fanart”** (Ex. “[markiplier fanart](#)”)
    - This gives the generation a cute young amateur graphic design feel, adding hearts to the image and so on.

# Photorealistic Modifiers & Tips (DALL·E 2 examples in hyperlink)

## - Modifiers:

### ● Image Quality

#### ○ [“4K/8K”](#)

Most images in the dataset with the caption “4K/8K” are of high production value therefore will look more professionally photographed if you add this modifier.

#### ○ [“15mm wide-angle lens”](#)

Very wide image with lots of information in the image.

#### ○ [“35mm lens”](#)

Reasonable amount of background blur, reasonable zoom level.

#### ○ [“85mm lens”](#)

Quite zoomed in photo, a lot of background blur and detail on subject.

#### ○ [“200mm lens”](#)

Extremely zoomed in photo, tons of background blur, & will look like it was photographed from a far distance and then zoomed in a lot (good for photos of flying birds, small animals”).

#### ○ [“Bokeh”](#)

Enforce a large amount of background blur with clear outer bands, this can be used as a replacement for the “mm lens” prompts. Also could cause the subject to be closer to the camera.

#### ○ [“Award-Winning”](#)

Will greatly increase the odds of the image being of high production quality and more aesthetically pleasing.

#### ○ [“Tilt-shift photography”](#)

#### ○ [“Cinematic Movie Photograph”](#)

Adds a very atmospheric movie-like feel to the image, with great color tones and image composure, and can also add nice background blur and pretty camera angles.

- “Macro”

Will give a very close-up image with lots of background blur (good for small objects, animals).

- *Lighting*

- [“Cinematic Lighting”](#)

- Movie-like imagery with dramatic shadowing and very strong vibrancy, it also seems to add sun rays whenever it can.

- [“At/During Golden Hour” or “Golden Hour Sunlight”](#)

- The hour just after sunrise or just before sunset when the natural light is soft and warm. Increases the temperature of generations.

- [“Ambient Lighting”](#)

- [“Studio Lighting”](#)

- Dark/light background is imposed behind the subject, lighting accentuates details of the figure in the foreground.

- [“Lens Flare”](#)

- Adds a streak of light onto an image generation, creating the appearance of a bright light source being just outside of the frame.

- *Situational*

- [“Nature Photography”/“National Geographic”](#)

- Photographs in the dataset with these captions tend to showcase animals/nature in extraordinary positions and situations, works similarly to “Award-Winning” but is only for nature. This will also make animals/nature look more real and accurate.

- *Other*

- [“Infrared Photography”](#)

- [“Ultraviolet Photography” \(2\)](#)

- [“Pinhole Photography”](#)

- [“First person GoPro image”](#)

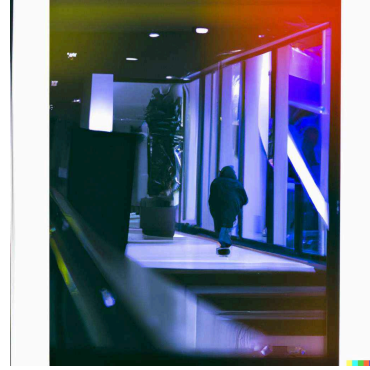
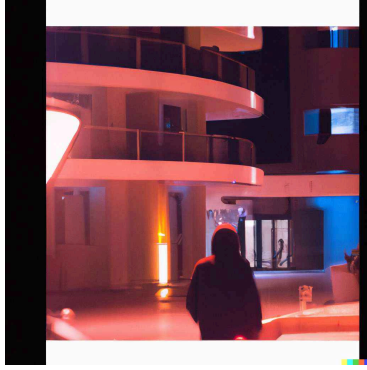
- Creates an image from the point of view of a human, usually showing arms and sometimes legs, works best in exploration context.

- [“Knolling”](#)

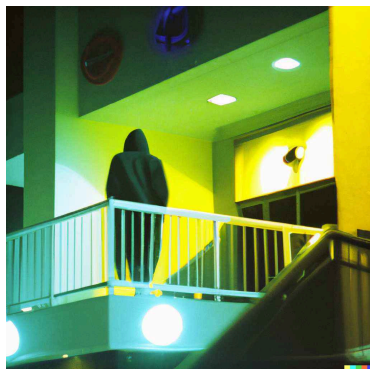
- Breaks down object(s) and rearranges them into an organized array, viewed from a top-down angle.

○ “[specific type of] film”

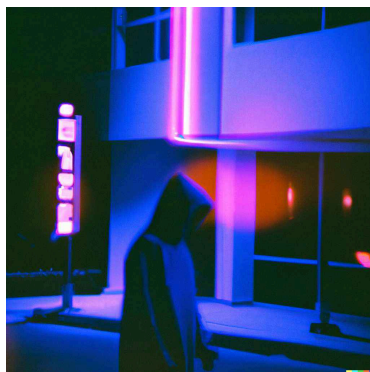
Applies an off-white/hue atmosphere to a photograph, with added grain, further enhancing the authenticity of a generation



*“Telephoto lens photo of a hooded figure leaving a hotel at night, neon lighting, polaroid”*



*“Telephoto lens photo of a hooded figure leaving a hotel at night, neon lighting, kodak gold 200 film”*



*“Telephoto lens photo of a hooded figure leaving a hotel at night, neon lighting, expired 35mm film”*

↓ (Original/Experimental Styles or Modifiers)

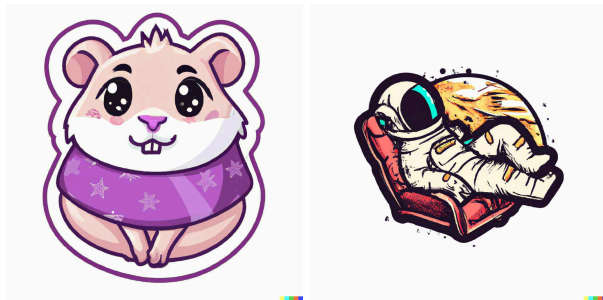
# Original/Experimental Styles or Modifiers

- **Styles**

- “Cybertronic (object/animal), LEDs, high detail, sharp, studio, digital art”



- Sticker illustration



- Tattoo design



- “Tattoo of”

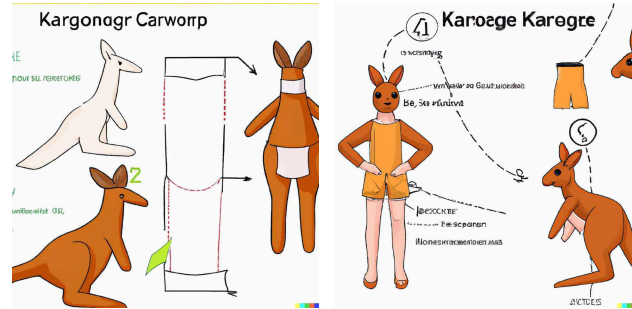




○ Cave painting



○ WikiHow Guide



[\(source\)](#)

○ IKEA Guide



[\(source\)](#)

○ Movie Poster



○ Linocut

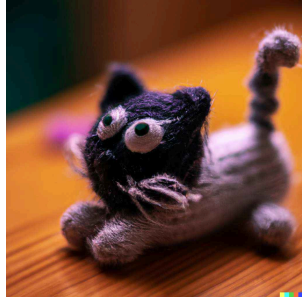




- Origami



- “, made of yarn”



↓ (Product Design)

## Product Design

One of the things I have noticed DALL·E 2 is great at is its ability to design products for things that don't exist yet. This is one of the things the AI excels at creatively. Let's take the following prompt, or subtle variations of it, and see what we can create with it:

"A(n) X that looks like a banana"

Perfume bottle:



Pair of shoes:



Necklace:



Security Camera:



To  
be  
continued

↓ (Photoshop Assets)

# Photoshop Assets

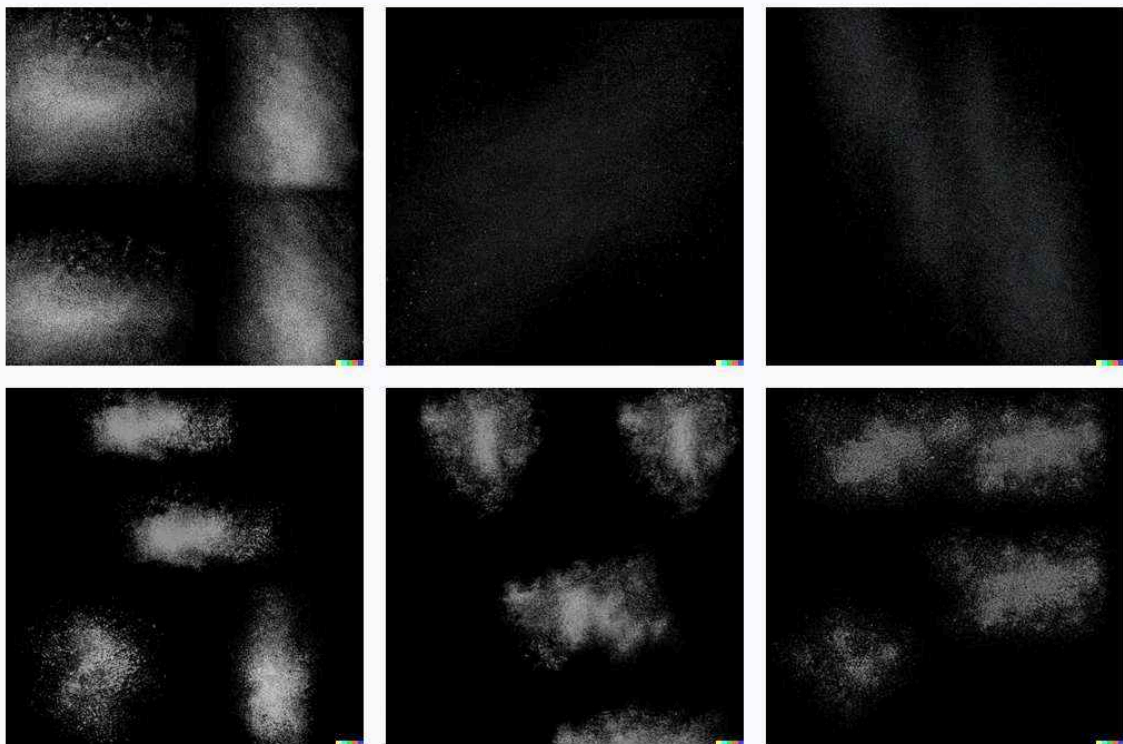
During the creation of this paper, we learned that DALL·E 2 is very good at creating assets for Photoshop, a set of graphics that you can implement directly into tools. This section of the document will go over said discoveries, including overlays, brush sets, et cetera.

## 1. Paintbrush sets



Ex: "photoshop brush set of leaves"

## 2. Dust overlays



Ex: "png dust overlay for photoshop"

⬇️ (DALL·E 2's Misses)



## DALL·E 2's Misses

While DALL·E 2 seems to be able to create anything that you can think of, there are a few places in which it falls short of what you might have deemed to be feasible. This section of the paper will go over these specific modifiers, and ways to create prompts, that could go wrong in the mind of the AI model.

### 3. Generating coherent text

3.1. When prompted to create a sign with a specific message, or asked to make a meme, DALLE-2 falls a little short. It seems as if the AI model is able to generate letters from the Latin alphabet fine, but has trouble creating stand-alone words.



Ex: "A photograph of a street sign that warns drivers that oversized bears are nearby"

3.2. Although DALL-E 2 is unable to spell most words it is prompted to, it excels at spelling certain words that are common as an independent greeting/sentence.



Ex: Unknown prompt, completed by Moxi

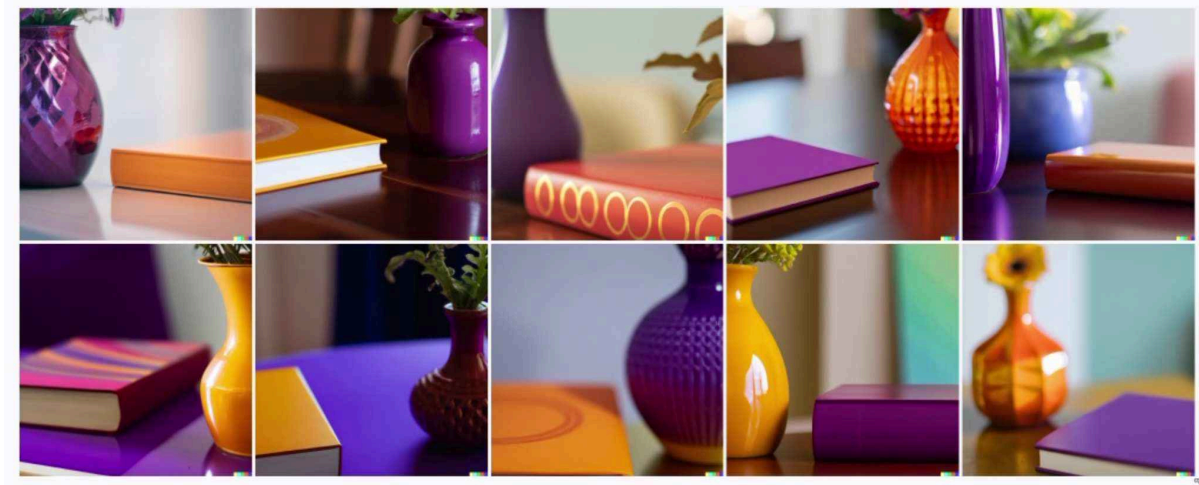
4. More than one character/objects in a scene

4.1. DALL·E 2 has no problem with creating more than one person/character of interest in a scene, but falls short in separating certain characteristics of each from each other, choosing to mish-mash whoever you mention into a totally different set of personas, or “create” new ones.



Ex. “Spiderman and Batman having a dance-off in a dance club, digital art, award winning”

4.2. Additionally, DALL·E 2 does the same thing for two objects, choosing to mix the characteristics (colour, shape, etc.) of one another with each other.



Ex: “An orange book next to a purple vase on a table, 500mm lens, 4k photograph”



5. "Mouse chasing a cat" scenario

5.1. Like most of us, we like to stick to certain beliefs. DALLE-2 is not a stranger to that sentiment; when asked to generate a *mouse chasing a cat* (in a digital art style), the AI model is unable to deliver, instead showcasing generations of an expected cat chasing a mouse, which is what we deem to be "normal" in nature:



Ex: "A large mouse chasing a small cat, digital art"

5.2. It is worth noting that four runs of this prompt was not enough to return a picture of "a large mouse chasing a small cat", with no generations matching the prompt description. We even tried adding "role reversal" at the end of the prompt to no avail.

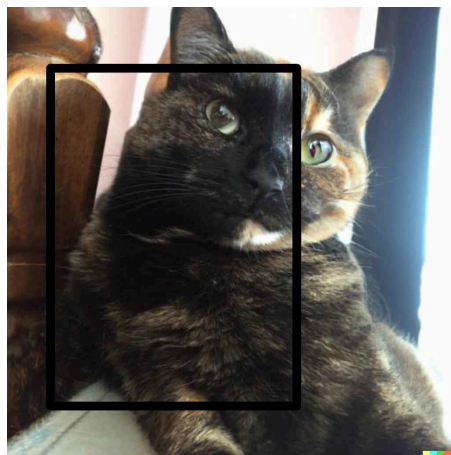
5.3. Another example that can be highlighted here is the use in creating photorealistic imagery; DALL·E 2 is seemingly unable to create portraits of people with one eye, defined by the modifier/phrase "one eye Cyclops" in the following example, and chooses to crop the photo of a normal portrait, showing only one eye in view.





## 6. Eyes of people/characters in generations

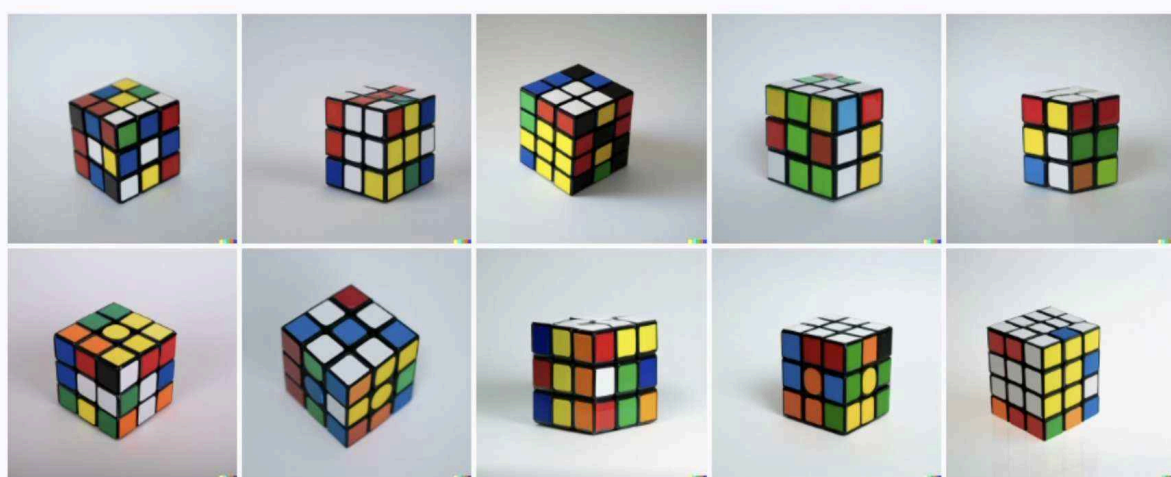
6.1. While generating a photo, painting, etc. of someone or something in DALL-E 2, the eyes of said individual might look a little peculiar, in comparison to how you may expect. Those in generations may appear to not be looking in the same direction with both eyes, have different sized pupils, et cetera.



Ex: Inpainting test on Lucas' cat Peaches, box in image represents original photo: "black and orange cat's face, photo" [\(source\)](#)

## 7. Twisty puzzles issues


7.1. DALL-E 2 can generate images of a Rubik's cube, but it cannot show you what it looks like solved, even when strictly cued to do so in the prompt.



Ex: "A solved rubik's cube against a white background, professional stock photo, 30mm lens, 4K"

7.2. Furthermore, the AI model also generated *impossible* pieces in some of the photographs, with the ones in images #2 and #10 having corners with two out of three sides being white. As well, the Rubik's cube in image #2 has the centre pieces for white and yellow are next to each other and not on opposite

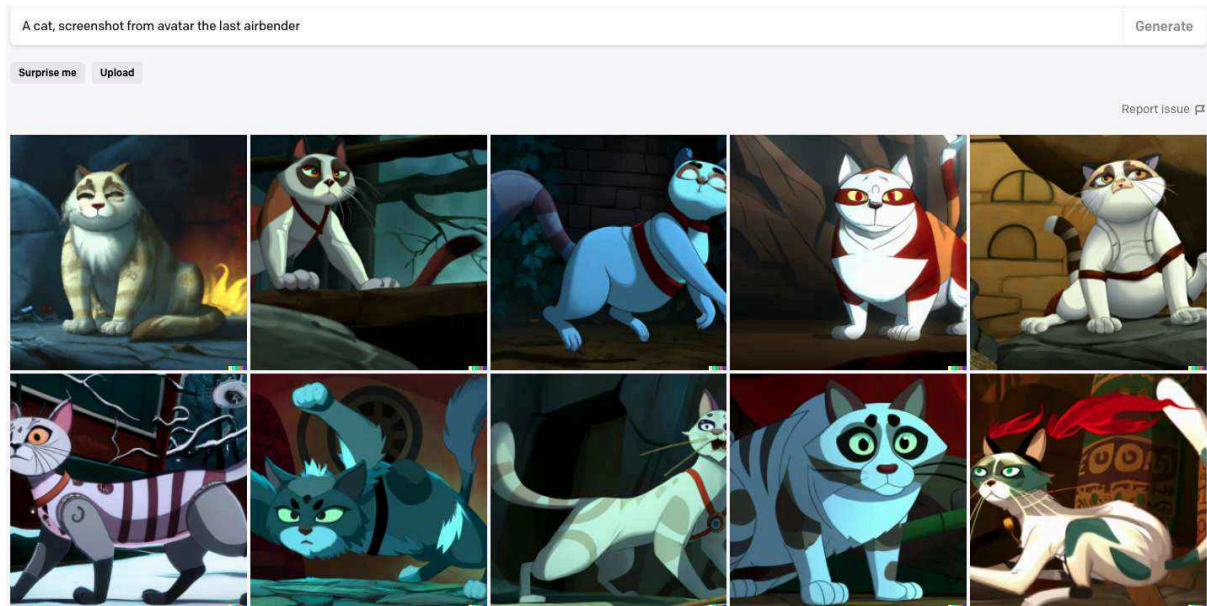
sides. It also appears to be that in four of the generations above that a few stickers are missing.

 (Cartoon Modifiers)

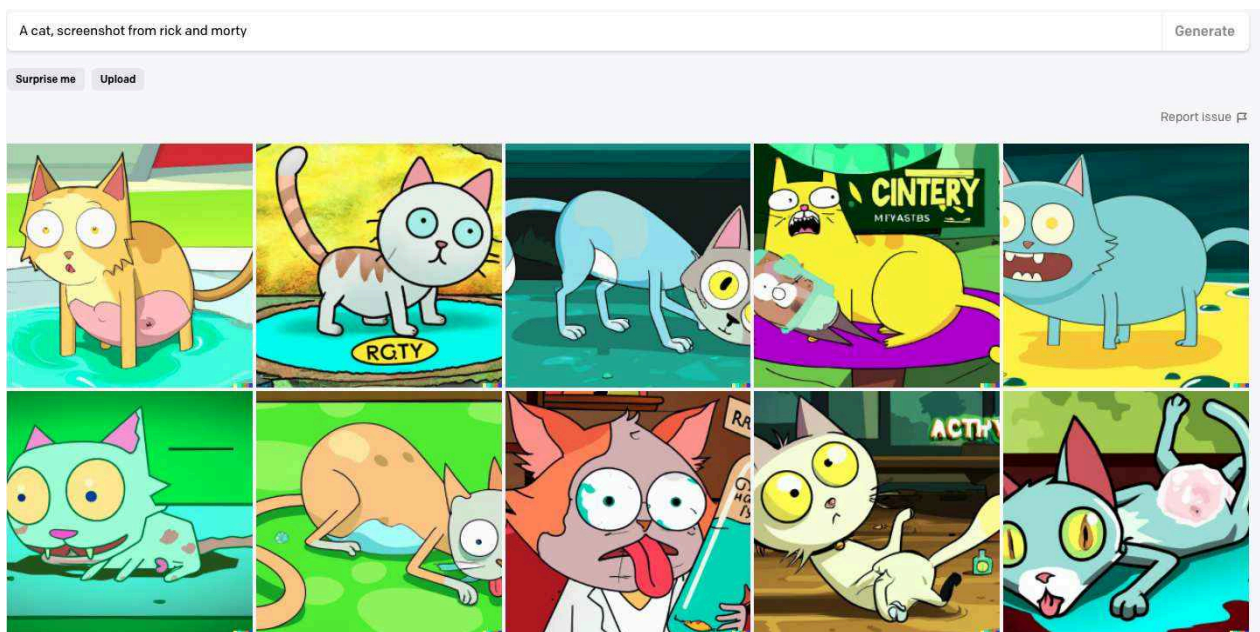
# BONUS: Cartoon Modifiers

- Throughout our research, Moxi, our friend with access, had discovered that DALL·E 2 is incredible at recognizing & applying art styles found in cartoons to simple prompts:

- “, screenshot from avatar the last airbender”

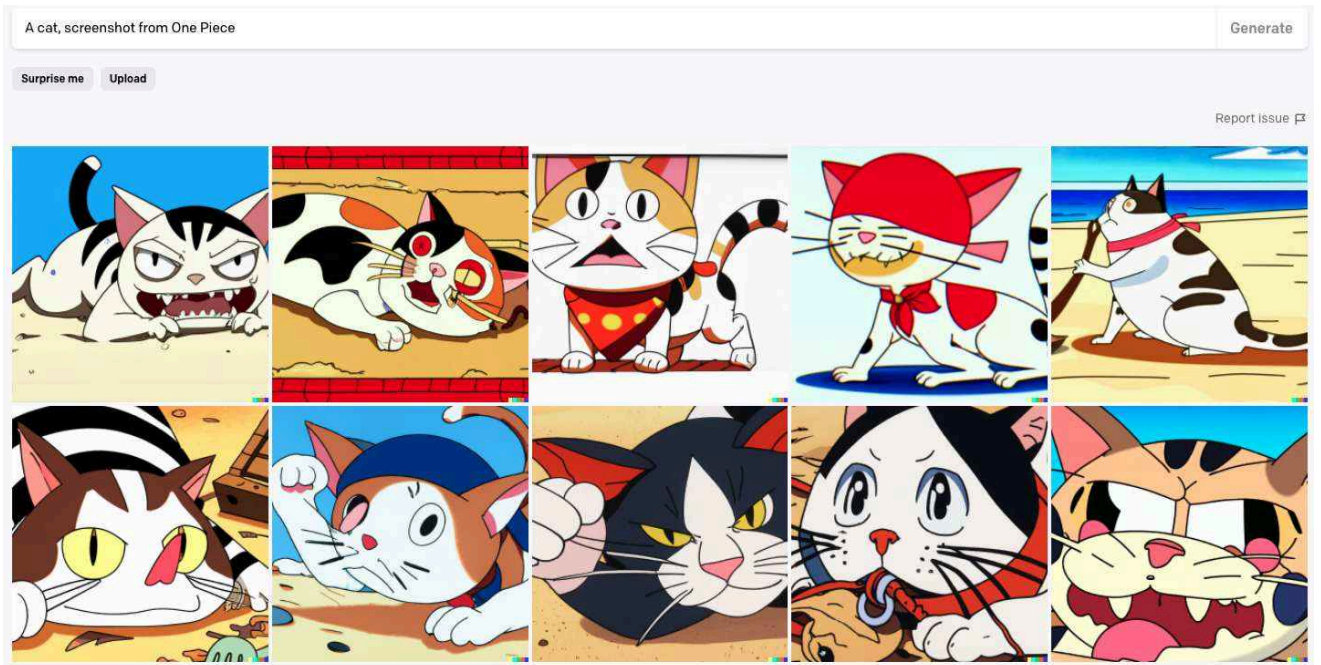


- “, screenshot from rick and morty”

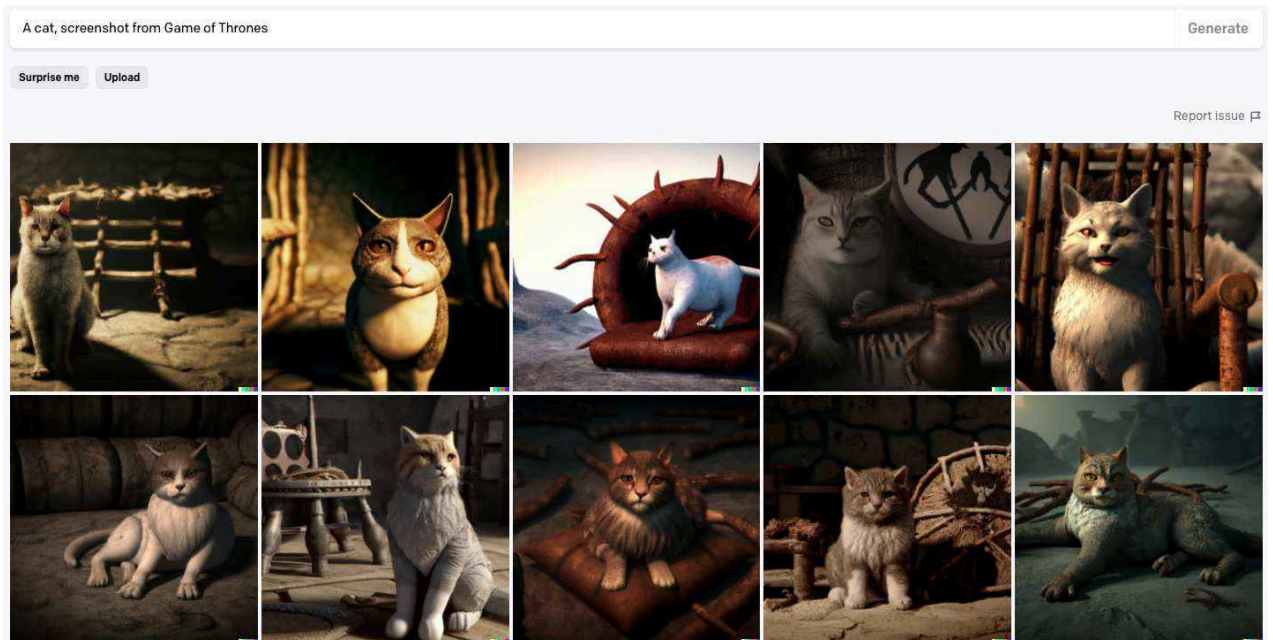




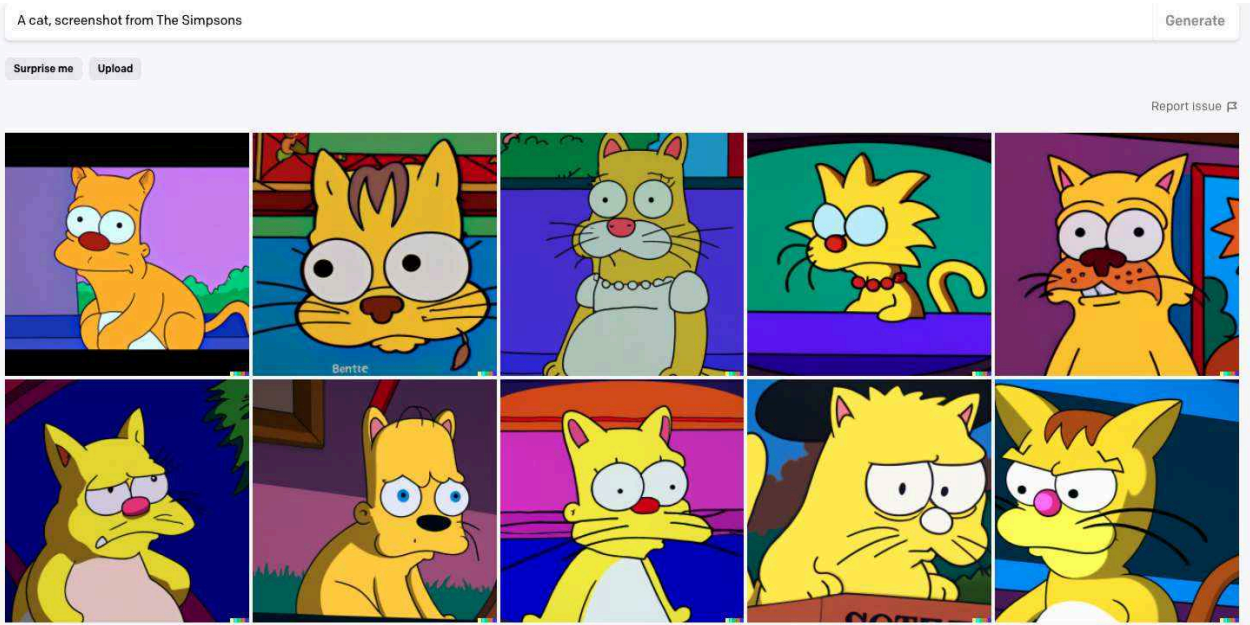
- “, screenshot from One Piece”



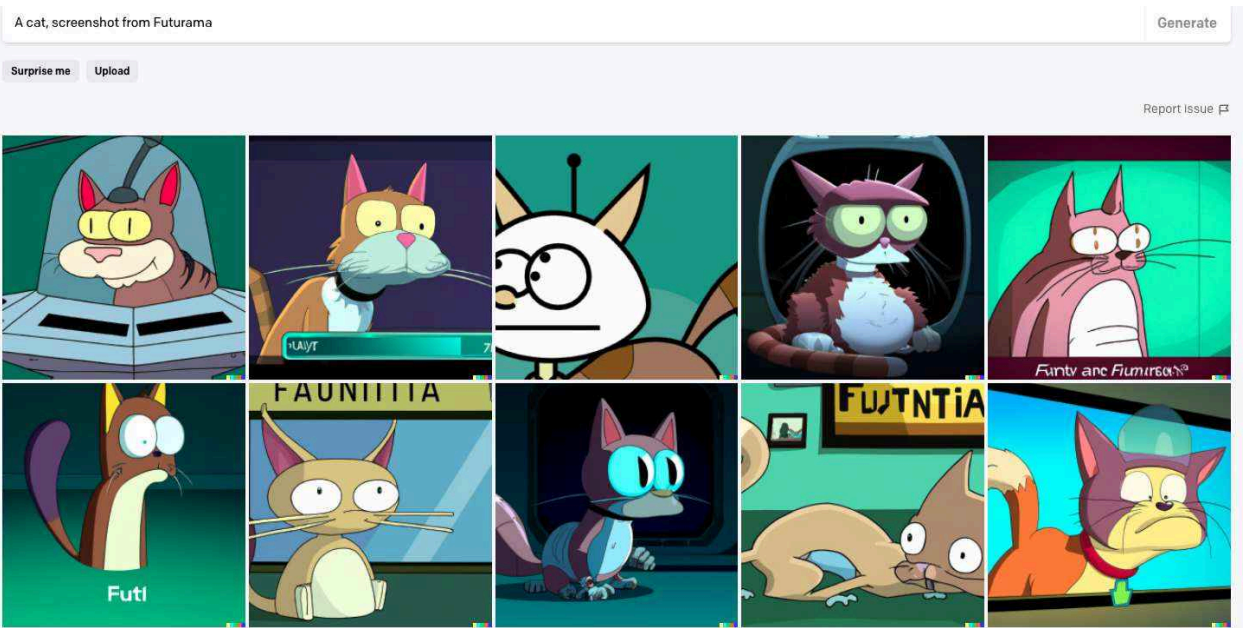
- “, screenshot from Game of Thrones”



- “, screenshot from The Simpsons”



- “, screenshot from Futurama”



- "screenshot from South Park"

