CREATIVE MEDIA
FUNDAMENTALS

ARTIFICIAL INTELLIGENCE
## FOR PHOTOGRAPHERS

**CREATIVE MEDIA FUNDAMENTALS**

CMF006

GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

Generative AI is a subfield of artificial intelligence that focuses on creating new content. It uses word input into a computer to produce images, text, video, or music. The following are some images created with Generative AI. All of the images throughout these notes are AI images. There are no traditional photographs or drawings here.
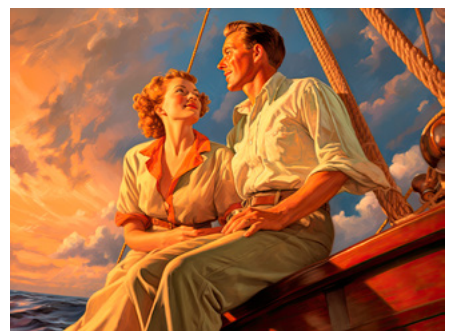
THE EARLY DAYS

The field of AI was officially born in the 1950s when researchers began exploring the concept of creating machines that could simulate human intelligence. The term "artificial intelligence" was coined during this time.
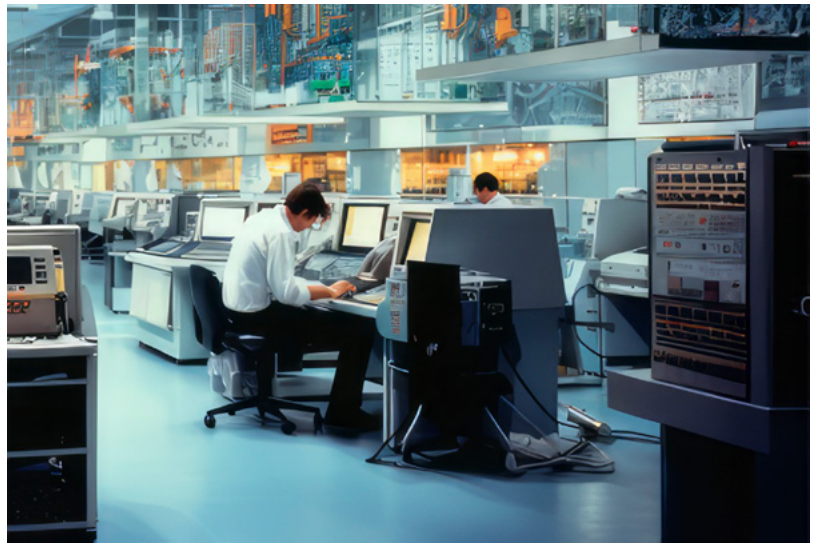
Not much happened until the 1990s, with the advent of better, more powerful computers. The start of neural networks and statistical techniques became increasingly important in AI research.

A neural network is a model that mimics how the human brain works, with several computers all working together to solve a problem. Neural networks are used in everyday life today in face recognition, speech recognition, text translation, credit card fraud detection, and even medical diagnosis.

Online shopping started using AI in the early 2000s. AI-powered recommendation systems have become very sophisticated, providing highly personalized product suggestions based on user behavior, purchase history, demographics, and similar user profiles.

TEXT TO TEXT AI: ChatGPT

Ask ChatGPT a question and in seconds, it gathers the information and answers you in a conversational-style answer. This is much different from doing a Google search where you have to decide what websites to go to and determine whether or not they have the information you are looking for. Google web searches can be scattered. ChatGPT is more like a precision instrument in comparison.

HOW CAN A PHOTOGRAPHER UTILIZE ChatGPT

If you're going somewhere new, you can ask ChatGPT for interesting locations to photograph. The next page shows the question asked and then the responses.

QUESTION TO ChatGPT:

What is in Oslo, Norway that would interest a photographer?

ANSWER FROM ChatGPT:

Oslo, Norway is a beautiful & photogenic city with plenty of interesting sights & landmarks to capture on camera. Here are some of the best sites for a photographer in Oslo:

1. **Oslo Opera House:** This stunning modern building is an architectural marvel and offers panoramic views of the city from its rooftop.

2. **Akershus Fortress:** This medieval castle and fortress overlooks the Oslo Fjord and is a popular spot for photographers, especially at sunset.

3. **The Viking Ship Museum:** This museum houses three well-preserved Viking ships and other artifacts from the Viking Age, providing a unique and interesting photo opportunity.

4. **Vigeland Sculpture Park:** This park is home to over 200 bronze, granite, and cast iron sculptures by the famous Norwegian sculptor Gustav Vigeland.

5. **Holmenkollen Ski Jump:** This iconic ski jump offers sweeping views of Oslo and the surrounding area, as well as a chance to capture some dramatic action shots of skiers in mid-air.

6. **The Royal Palace:** This impressive building is the official residence of the Norwegian monarch and is surrounded by beautiful gardens, making it a great location for portrait photography.

7. **The Barcode Project:** This row of modern skyscrapers along the waterfront offers a striking contrast to the city's historic architecture and can make for some striking architectural shots.

8. **The Oslofjord:** This picturesque fjord is a popular spot for boating, fishing, and kayaking, and provides numerous photo opportunities for capturing the stunning scenery and coastline.

These are just a few of the many photo-worthy sites in Oslo. Whether you're interested in architecture, history, or natural beauty, you'll find plenty of inspiration for your photography in this stunning city

AN APP THAT USES AI FOR TRAVELERS

This is just one app that we've seen, but be sure to do a search, as there may be many more apps available by the time you read this.
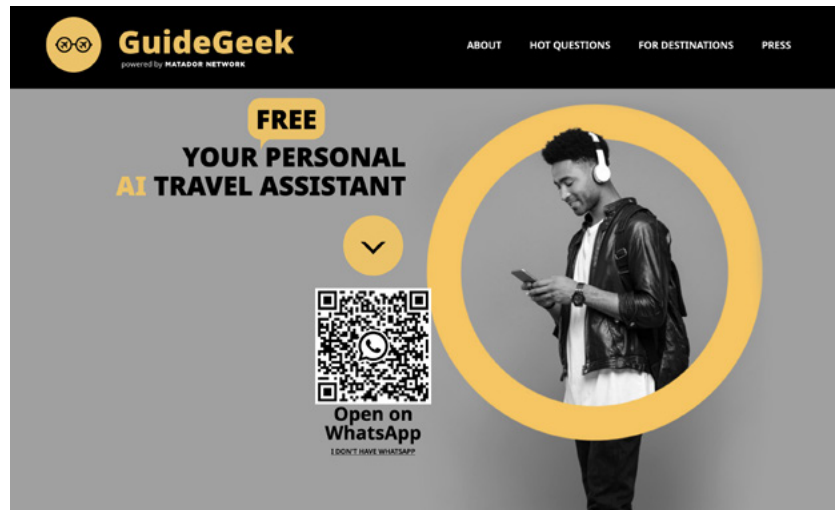
SAMPLE QUESTIONS AND ANSWERS FROM THE SITE

Trouve moi un logement sur Airbnb 100km de Lyon avec une vue panoramique a moins de 50€
Ask

خطط لي مسار لرحلة في تايلاند لمدة ١٠ ايام
Ask

What's the most underrated place to go in Cambodia? I'm looking for something off the beaten path.
Ask

If you're looking for a place in Cambodia that's off the beaten path and underrated, I would recommend a visit to the province of Mondulkiri. It is located in the northeast of Cambodia and offers beautiful natural scenery such as waterfalls, jungles, and hills that are ideal for hiking, trekking, and wildlife spotting. You can also visit the elephant sanctuary here and learn about the efforts to protect and care for these majestic animals.

Mondulkiri is a sparsely populated province and offers you the opportunity to experience the true essence of rural Cambodia, where you can interact with locals, experience their culture, and enjoy local delicacies. There are also unique experiences to be had, such as staying in a traditional hill tribe village and learning about their customs and traditions.

Overall, Mondulkiri offers a serene and peaceful escape from the hustle and bustle of Cambodia's more touristy destinations, making it an excellent choice for travelers looking for something more off the beaten path.

What are some special items on the McDonald's menu in Japan?
Ask

McDonald's in Japan serves a variety of unique items that you won't find on menus in other countries. Here are some of the special items on the McDonald's menu in Japan:

1. Teriyaki Burger: This burger features a beef patty glazed with sweet teriyaki sauce, topped with lettuce, mayonnaise, and a slice of cheese, all served on a sesame seed bun.

2. Ebi Filet-O: This is a twist on the classic Filet-O-Fish sandwich, but instead of fish, it features a deep-fried shrimp patty, cocktail sauce, lettuce, and tartar sauce on a sesame seed bun.

3. Shaka Shaka Chicken: This is a chicken nugget dish served with a packet of seasoning that you can pour over the nuggets and then shake to distribute the seasoning.

These are just a few of the special items on the McDonald's menu in Japan. Let me know if you want me to provide more information on these menu items, or if you want me to email you more unique Japanese fast food offerings and related links!

What are the must-know customs in China?
Ask

WORDS = "PROMPTS"

You type words or sentences (called a prompt) into a cell phone, an iPad or a computer and it produces an image in seconds. You can get great results with very simple prompts, but the more detail there is, the more control you have over the final result.


Coming up with words or sentences to "prompt" the computer is a little like learning a new language. The more you learn the language of prompts, the closer you can get to the specific image you are trying to create.
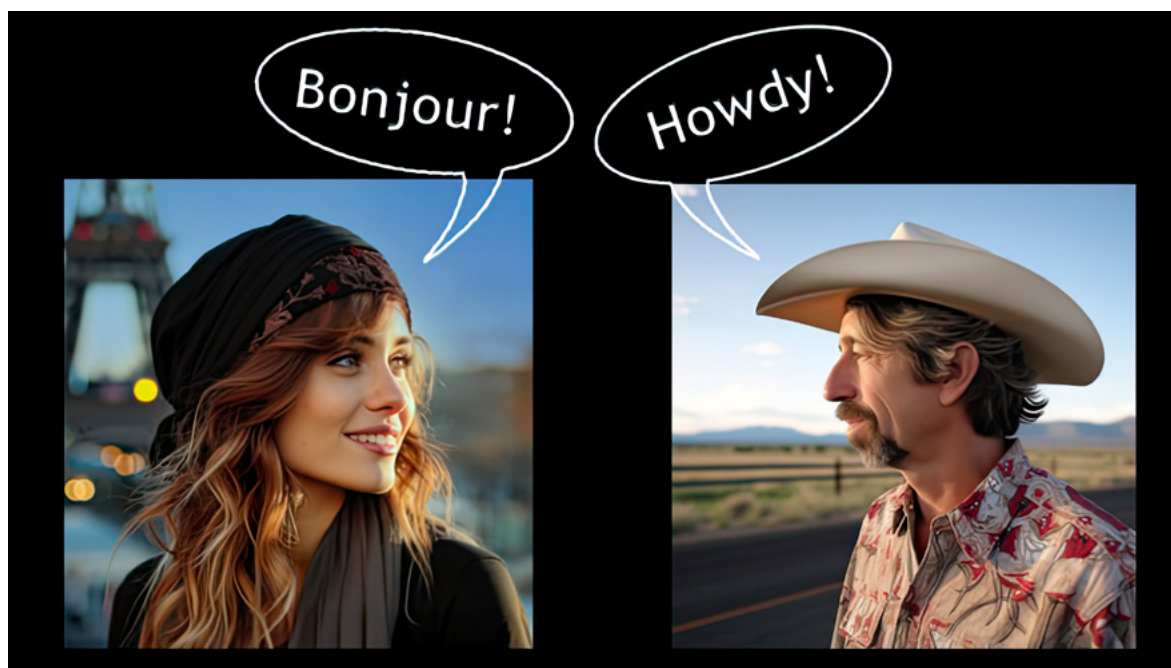
DALL-E

Dall-E or Dall-E2 is a great starting place, as it's one of the easier ones. It's from the same company as ChatGPT, so you can access it from the same website. You get 25 free credits each month. A credit is good for a prompt and an image. You can buy more credits if needed.
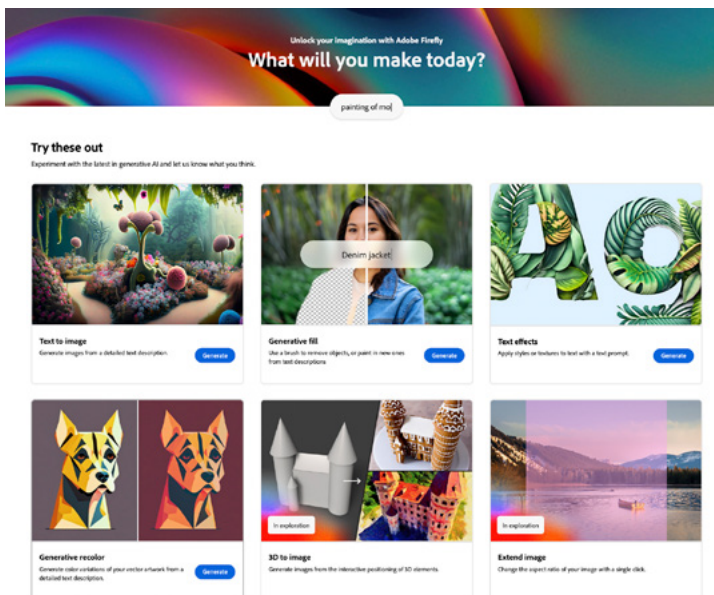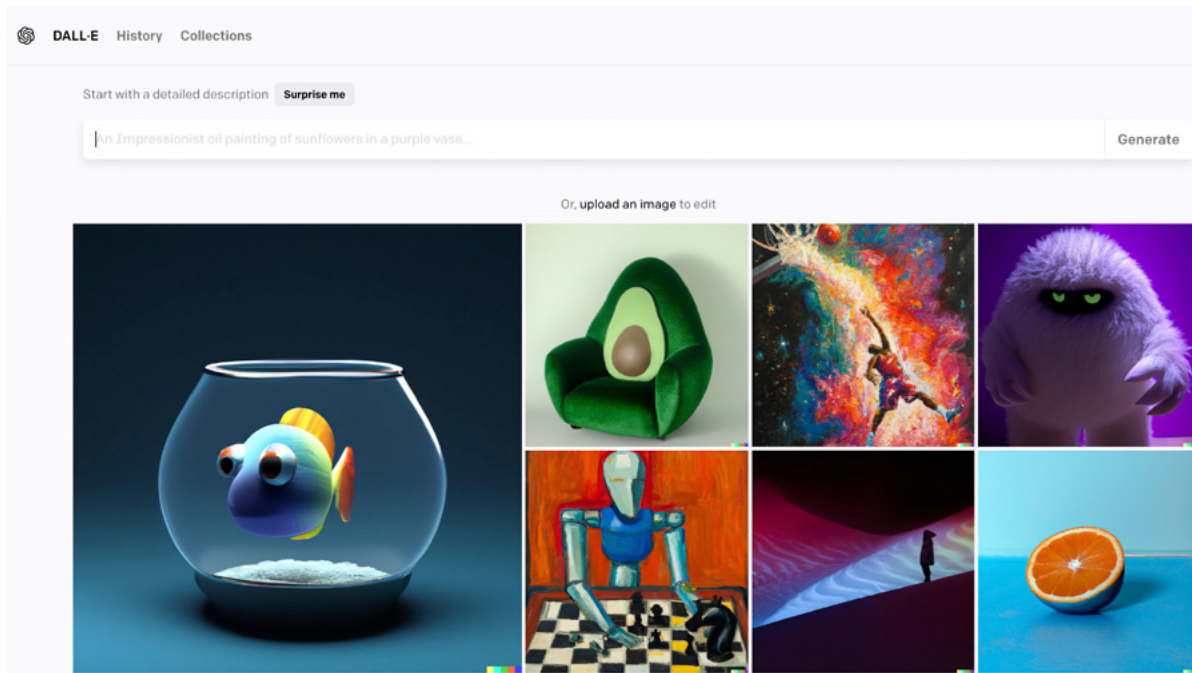
ADOBE FIREFLY

Adobe Firefly is also a good starting software as it's easy to use. Firefly has been rolling out new weekly features ever since it was released. This can drive instructors crazy, just trying to keep up, but their improvements keep amazing us. Their type treatments are unique to this software.

MIDJOURNEY

A very popular AI generator is Midjourney (www.midjourney.com). The majority of images shown in this presentation are from Midjourney. It is a more difficult piece of software and there is a cost to use it. There are several pricing levels with different functionalities. The cost is $10/mo, $30/mo, and $60/mo for the different plans.

Midjourney does not work as a stand-alone app at the time of this writing. You need to set it up and use it within a website called Discord (www.discord.com). Setting it up and getting used to the way Discord works is the hard part of Midjourney. Once you get the process worked out, it's much easier. Discord and Midjourney both work on your computer, your iPad or tablet, or your phone.

SIMPLE PROMPTS AND SPECIFIC PROMPTS

Without clear direction and detail in your prompt, you get what the computer gives you. This can be interesting sometimes, and frustrating if it's not what you really wanted. All of the images rendered are square unless otherwise specified in your prompt. You get four renderings of your prompt at a time.

SIMPLE PROMPT: A CAT

A simple prompt is OK, but the computer will pick the style and the type of cat you get. Sometimes that can be great, like when you don't know what you really want. But it can be frustrating if the images rendered keep falling short of what you're tying to do.

SPECIFIC PROMPT: A MAINE COON CAT PLAYING IN A BACKYARD

The more specific the prompt, the more unified the rendering of images produced. Here, all four renderings produced were the same cat breed. This is much unlike the previous slide with four very different cats when the breed was not specified.

SIMPLE PROMPT: A BOY

COMPLEX PROMPT:

A 14 year old boy playing the violin in a Baroque style, chiaroscuro lighting, inside a highly decorated Renaissance era home

REPEAT, REFINE, REPEAT, REFINE

This started with a detailed prompt. It was then repeated, fine tuned and refined with more detail. Also, the aspect ratio was changed to 16:9 in future prompts.

PROMPT: A 16-year-old dark haired girl in 1920 Eastern Europe Poland full length in traditional peasant dress holding a milk bucket on a sidewalk in an old village, wide shot, photographed with a Leica in the style of Roman Vishniac --ar 5:7

The "--ar 5:7" is the prompt to produce a 5x7 ratio, a portrait-sized vertical image.

It was decided after seeing these and future iterations to make it sepia and switch to the horizontal landscape aspect ratio. After the initial results, it was repeat, refine, repeat, fine tune. The secret is sometimes knowing when to stop.

PROMPT SPECIFICS

The prompts for the first four images were "A dog sitting." The first question to ask yourself is "what type of style should the image have?" The styles you can choose from are endless. Below are just a few examples. Some photo styles can include B&W or color, in the style of Ansel Adams or Annie Leibovitz. Cartoon styles can be comic book, Pixar, Japanese Anime, Simpsons cartoon, or caricature. For painting styles, try Impressionist, cubism, pointillism, abstract, Picasso-like. Drawing styles can include Pen & ink, pencil, pastels, silhouette or technical.

Photo   **Cartoon**   **Painting**   **Pen & Ink**

Then there is what age, male or female, and even what ethnicity?

Younger   **Older**   **Gender**   **Ethnicity**

MORE PROMPT SPECIFICS

What mood do you want your characters to have? Again, the range is as vast as your own imagination.

Laughing   Sad   Stern   Thoughtful

How many people should populate your image? Just one, a couple, a whole gang? Where should the image location be? These are just a few examples of the things to consider when writing your prompts.

Three   More   Location and Aspect ratio

MIDJOURNEY RESULT SCREEN

After you enter your prompt for Midjourney, you will get the screen below, with your results and options to proceed. You can decide one of the choices is exactly what you want, in which case you just click on that frame and up-size it by clicking on the appropriate "U" button. The frames are in order such that the top left is frame 1, the top right is frame two, the bottom left is frame 3, and the bottom right is frame 4. So if you liked the bottom left frame and wanted to up-size, you would press the U3 button.

If you liked the upper left image but wanted to see variations of that image, you would press the V1 button. For variations on the bottom right image, you would press V4. The blue circular arrows button can be used if you don't like any of these images and want to see four different images, but still use the same prompt. At that point, you could also edit your original prompt.
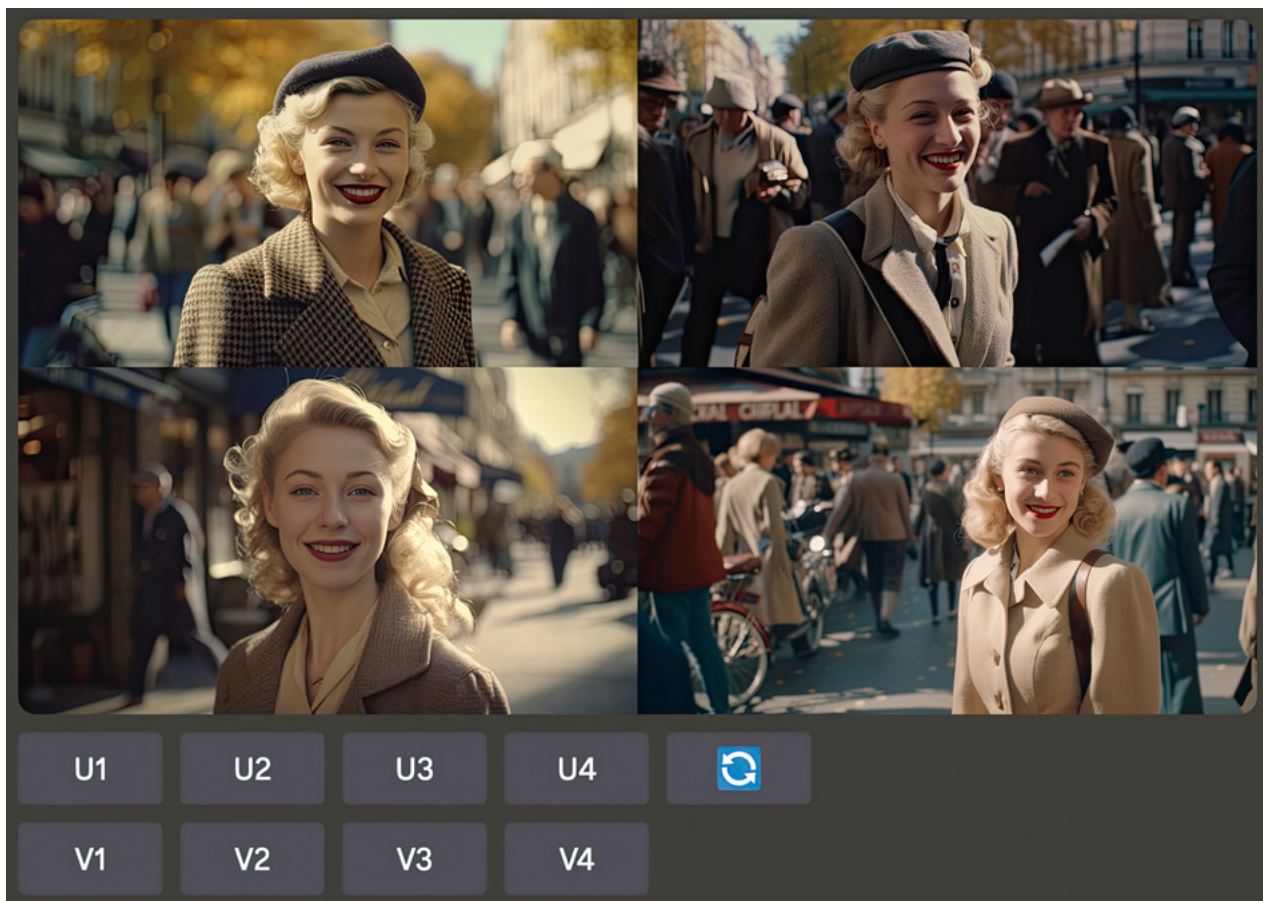
The blue two arrows in a circle button is if you don't like any of these images and want to see four different images, but still using the same prompt. At that point you could also edit your original prompt. The aspect ratio choosen for this image is 16:9, a cinematic size
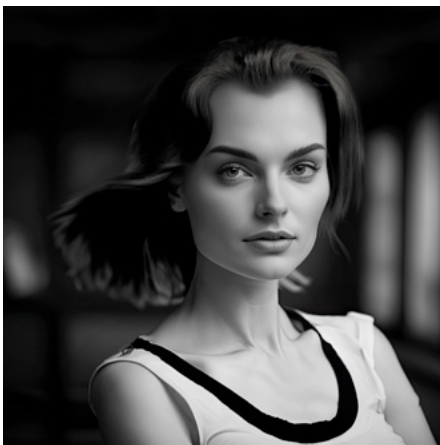
QUICK CHANGES

What used to take hours to do in retouching can now take seconds with AI tools like Adobe's Generative Fill, found in its Firefly and Photoshop programs. Changing the hair color and changing clothes now just takes some quick keystrokes.
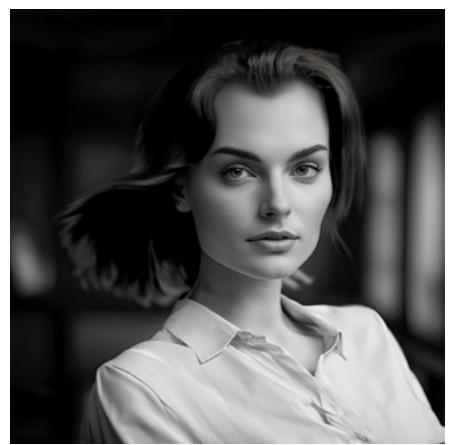

Original AI Woman

Change Hair Color

Change Blouse

Into Suit & Tie

Back to a Blouse

AI HALLUCINATIONS

One of the things to watch out for is mistakes AI makes, which are called "Hallucinations." Some can be very funny.

THE FUTURE OF AI

No one knows how this will progress in the future, but it does open up some interesting opportunities for visual creators.

SOME THOUGHTS

More advanced AI algorithms: In the future, we'll see more sophisticated algorithms that are better able to replicate various styles and techniques. This could lead to AI-generated art that is more creative and more original.

New art forms: AI has the potential to create entirely new art forms that are not possible with traditional methods. For example, we may see more interactive, immersive, or generative art that responds to real-time data or user inputs.

Increased accessibility: AI makes art more accessible to people who may have creative ideas, but no access to or talent for traditional art methods. This could lead to a more diverse art world.

Collaboration between artists and AI: We may see more collaborations between human artists and AI algorithms. This could lead to new art forms and a blending of traditional and digital art forms.