

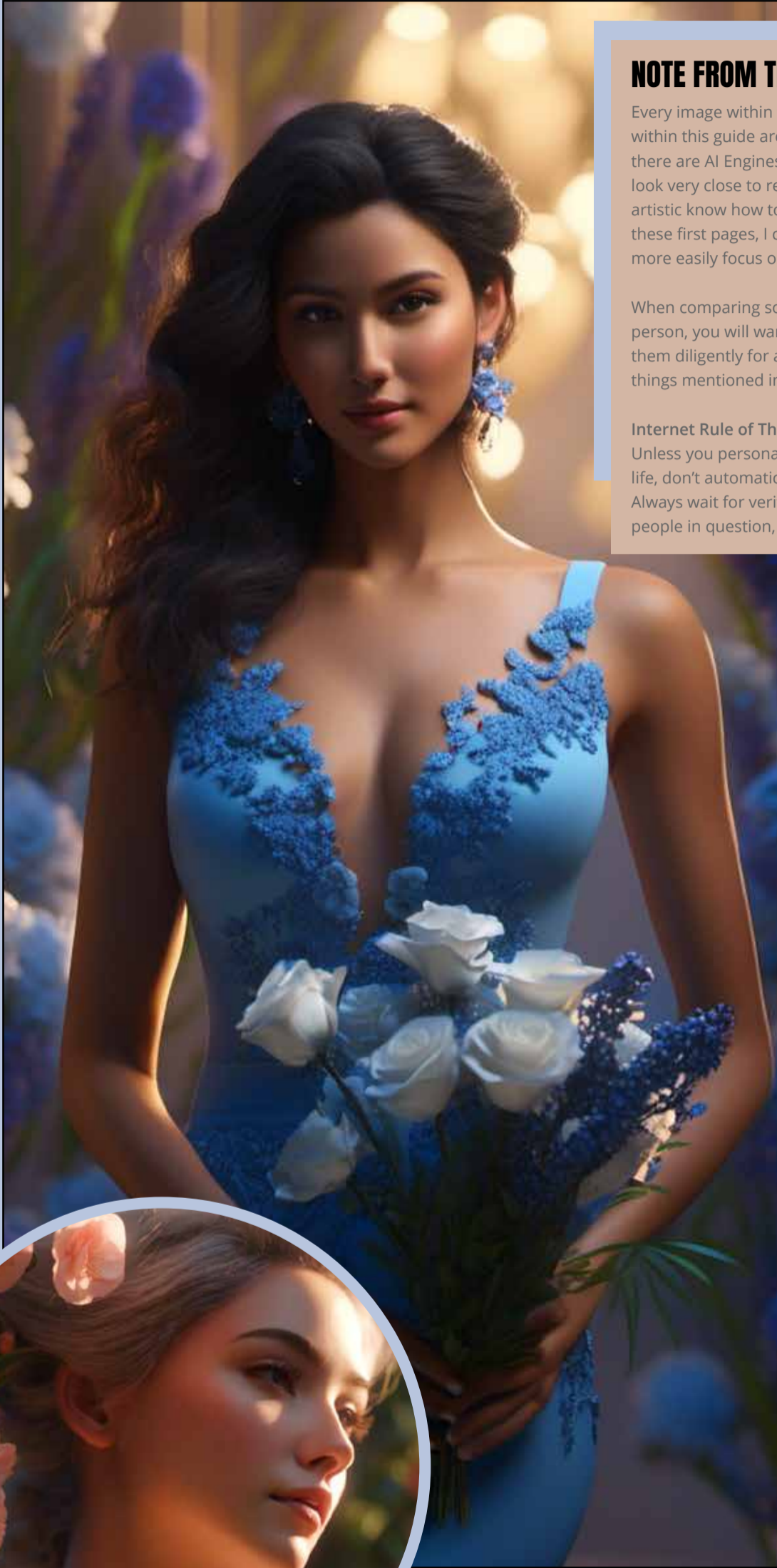
SPOTTING AI -ARTIFICIAL INTELLIGENCE-

SPOTTING AI



HOW TO SPOT GENERATIVE ARTIFICIAL INTELLIGENCE ONLINE

BY: ANN



NOTE FROM THE AUTHOR:

Every image within this Guide was generated with AI. Many of the images within this guide are purposefully not photo-realistic. Please note that there are AI Engines that can create very photorealistic images that can look very close to real humans beings and also people with enough artistic know how to also touch up errors that AI may generate as well. In these first pages, I chose not to go with photorealistic so that you could more easily focus on the specific points and see issues.

When comparing something you suspect may be AI with photos of a real person, you will want to look closely at all these same areas and compare them diligently for any differences, paying special attention to the specific things mentioned in this guide.

Internet Rule of Thumb

Unless you personally know the poster of an online image in your real life, don't automatically assume the image you are looking at is real. Always wait for verification from someone who knows the person or people in question, especially in the case of allegations.



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AI

THE BASICS

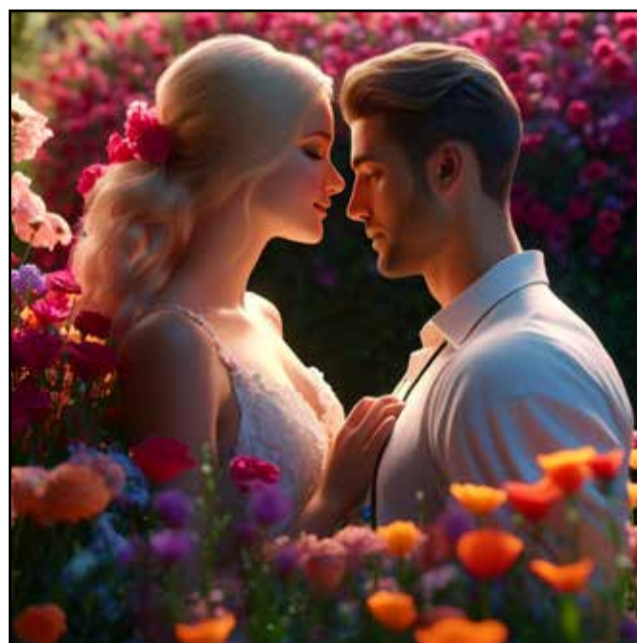
What is Generative AI (Artificial Intelligence)

Generative Artificial Intelligence (AI), or Generative AI, is a type of AI that can create new content like text, images, videos, and more using pre-defined parameters input by a user. In simple terms, it uses computers trained to produce output based on specific prompts/inputs.

Generative AI can learn from large amounts of data, including human language, programming languages, art, and more. It can then reuse what it's learned to create content. For example, a Generative AI model could learn English vocabulary and then create a poem using those words.

In Practice

When it comes to imagery, you can input information into a text prompt and it will then generate an image (or video) based on the text you enter.



Generated in Daz 3D AI Studio using the text prompt:
"Man and Woman standing in Garden of Flowers"

GENERATOR EXAMPLE

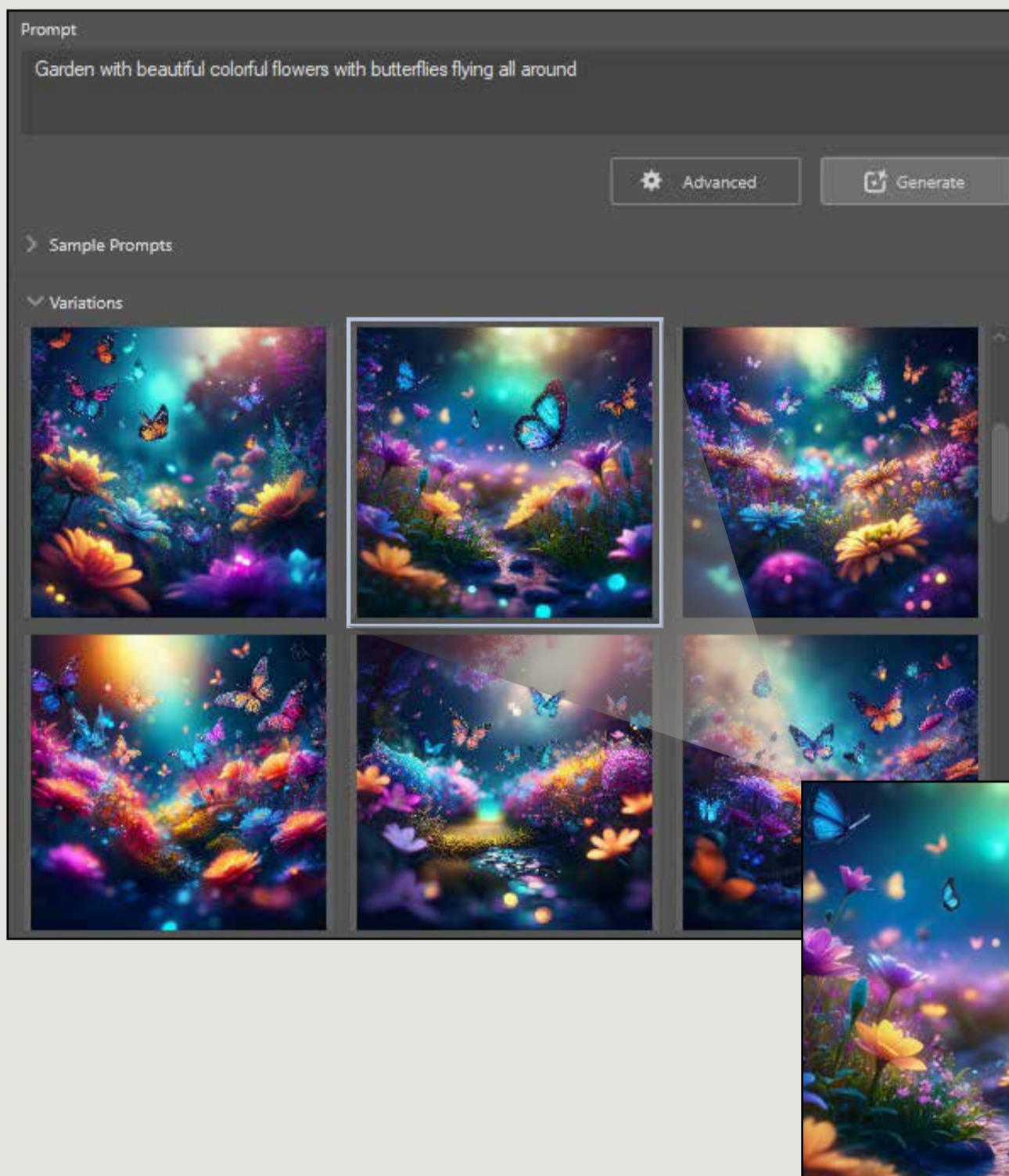


What Generative AI Software Looks Like

Now that we have spent some time seeing the results of Generative AI Software, what exactly does Generative AI Software look like?

In Practice

Screenshot of Adobe Firefly in Use



GENERATIVE AI: EXAMPLES

Some More Examples

As you can see from the previous page, its pretty easy to generate images from text prompts. The more specific the prompt, the more detailed and specific the image gets.



Generated in Daz 3D AI Studio using the text prompt:
"Man and Woman Dressed in Blue standing in Garden of Flowers"

Some More Examples

With just some simple text changes you can create a large variety of imagery, making it very easy to create images within minutes. That makes creating things like fake photos very simple.



Generated in Daz 3D AI Studio using the text prompt:
"Queen of Hearts Dressed in Red Sitting on Throne Surrounded by Candles"

HOW TO SPOT GENERATIVE AI

What is the Uncanny Valley

The uncanny valley is a psychological phenomenon that describes the feeling of unease or discomfort that people experience when confronted with an object that is almost human but not quite. When done by someone experienced, it can be hardly noticeable. That is especially true when the Generative AI results are combined with photographs or things like live tracking (in the case of video) that makes things seem more natural.

As a rule of thumb, if your gut says that something just doesn't quite feel right when looking at an image or video, then you should pay extra close attention to the details and give that image or video extra scrutiny. Especially when it comes to the internet, you want to pay VERY close attention to the details.

In Practice

When reviewing something to determine whether or not it may be AI, there are certain things you can try to check to help you more easily make that determination.

Things to Check: Hands



AI is especially bad at Generating Hands. Anytime hands are visible in an image, always be sure to check those first as (at least for now) AI severely struggles in creating hands correctly. Be on the lookout for things like "Hot Dog Fingers" (fingers that seem to lack definition or bones), fingers that seem to be odd in length, too many fingers, or things poking through fingers.

Generated using DAZ 3D AI Studio

SPOTTING AI: EXAMPLES

Things to Check: Eyes



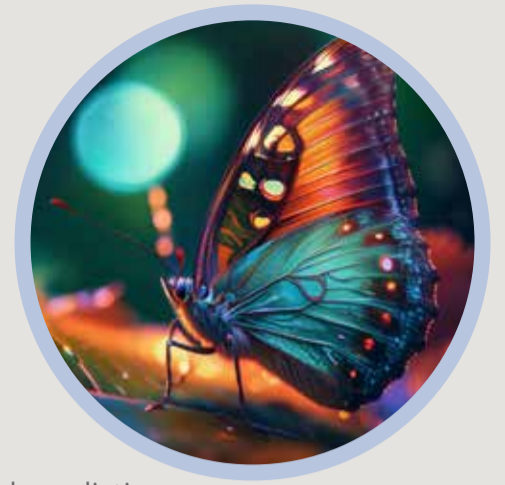
When reviewing eyes, look first for signs of lifelessness. Look at the eye reflections, do they make sense compared to the lighting within the image/video you are looking at? Does the shape/angle of the eye seem odd? Does the color of the iris seem unnatural? Look closely at eyebrows and eyelashes as well. Do the eyebrows have an odd shape, seem too clean or perfect? Do the eyelashes seem to be missing, strange lengths, cutting into the eye or have strange artifacts? Does the coloring underneath the eyes seem too perfect, smooth, or even toned?
Generated using Adobe Firefly.

Additional Things to Check: Lips and Teeth



Look at the details of the lips. Are they lacking texture? Do they seem too smooth, too perfect or symmetrical? Do they seem to be lacking subtle fading/bleeding into the skin?
For the teeth, look at the color. Do they seem too white, consistently colored or lacking details on the bottom edges (chipping, jagged edges)? Are the teeth lacking slight translucency?
Generated using Adobe Firefly.

REALISTIC RESULTS

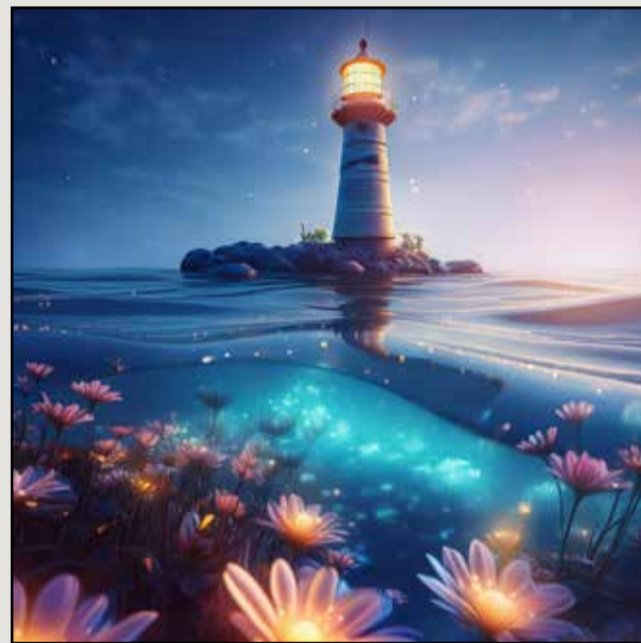


How Do People Get Realistic Results?

These days it is VERY EASY to get access to decent AI Generators that produce highly realistic, human-like results. There are multiple AI Engines and subscription services. Some services are free (requiring signups or registration) to access a service online, other services can be setup on your PC, others have a small cost (around \$10-\$20 per month) and some come built into software applications such as with many Adobe products. The general selection of companies that offer said services is pretty broad, giving a lot of people access to tools which they can use to help their artistic workflows (For Example: Removing and replacing a background from a person's photograph or getting rid of scratch marks and wear to restore a family heirloom.) The same tools can also be used to deceive, create a narrative, or sow confusion, anger, and doubt.

In Practice

When working with AI, you can put pretty specific things into the text prompts. While many services will not allow you to do things like put famous people's names into the text prompts, there are many services that will, allowing you to generate any images of that person you want. While it is something that can be done, I will not be demonstrating that feature in this pdf.



Generated in Adobe Firefly using the text prompt:

"Cat wearing fireman costume with building on fire in background"

"Lighthouse surrounded by bioluminescent flowers floating on the water."

REALISTIC RESULT: EXAMPLE



TIP:
Looking for strange
white or blurry
artifacts in the image is
a good way to spot
AI.



In the picture on
this page, around her
right eye (strange arti-
facts in the eyelashes)
and her teeth (blurred)
would be an example



Generated in Adobe Firefly using the text prompt:
“Close-up Portrait of Dark Hair Woman in Fancy
Peach Dress in Garden”

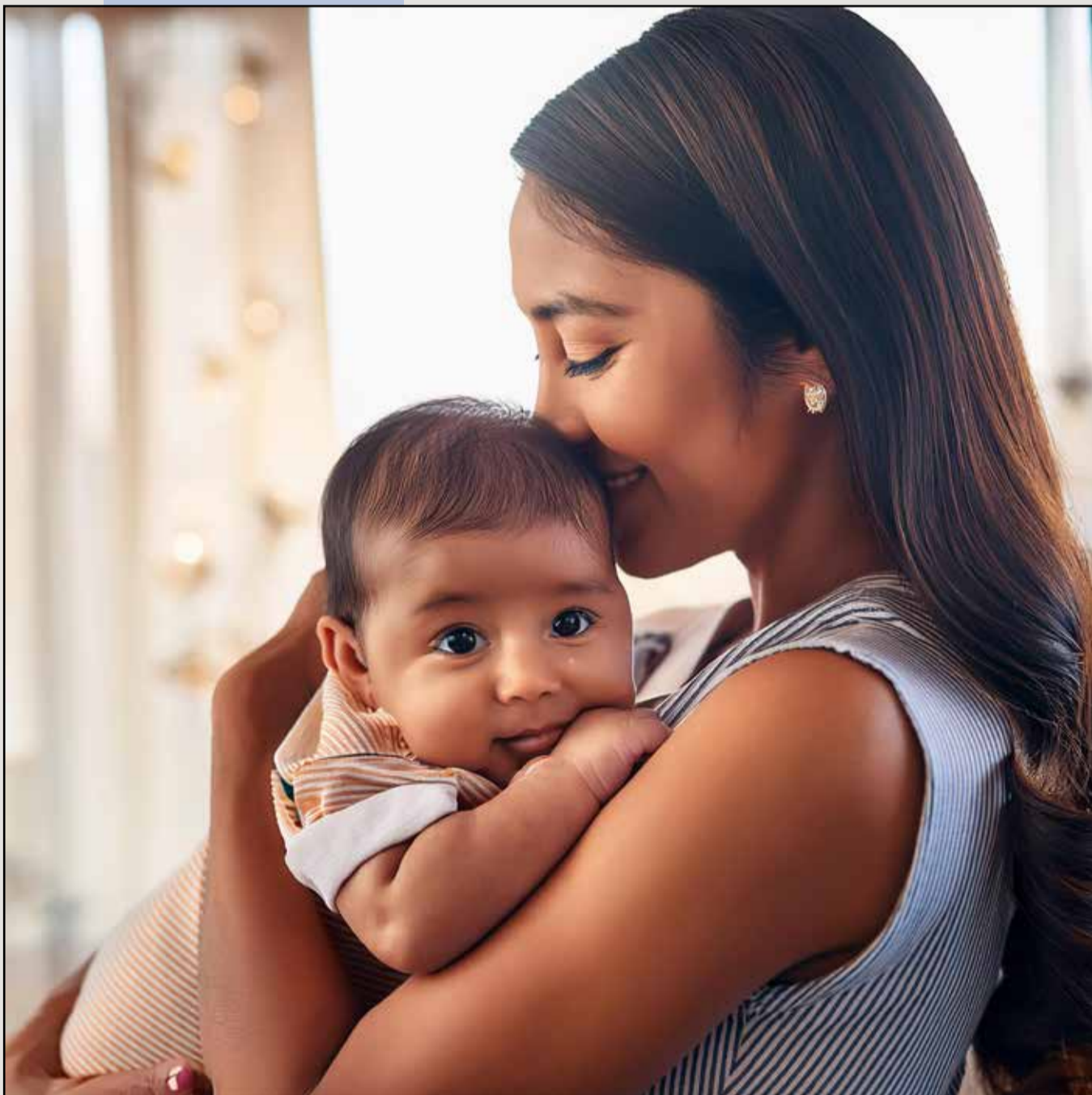
CAN YOU FIND THE PROBLEMS

Putting it All Together

Now that we have discussed Generative Artificial Intelligence, what it is, and how it works; it is time to put what you have learned to good use. On the next pages we will take a look at some AI generated images and see if we can't "spot" the things that give away that they are created using Artificial Intelligence (AI).

In Practice

Generated in Adobe Firefly using the text prompt: "Woman holding baby lovingly in her arms"
Can you spot the errors? (See next page for results)



WOMAN W/BABY ERRORS

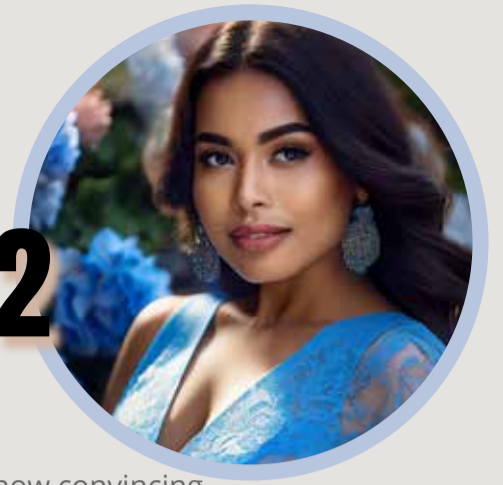
The Results:

This image generated fairly well so there are only some minimal errors that can be picked up on. Below you will find those areas circled (though there may be more that I didn't catch):

1. The mothers hand is warped. Hands don't bend that way in the middle (OUCH! LOL)
2. There are some very slight pixel errors (tiny singular white bright spots) where the AI didn't quite generate correctly (You can often find these in the eyelashes or around the edges of eyes)
3. The baby has some mishapping of the head (this on it's own would not be a telltale sign though since sometimes babies can have that more naturally) But especially around the cheek there are also bright pixels and some halo effect (strange bright line down cheek)
4. Slight error on the eyebrow making it jet upward un-natural to normal growth patterns
5. Super smooth and evenly toned skin (not always 100% indicator since people get photos air-brushed/edited but it should cause you to at least question and look closely)
6. Strange Artifacting/pixelation around earring.
7. One of the baby's eyes is turned inward (this can be a natural occurance but can also be AI).



FIND THE PROBLEMS PT 2



Putting it All Together

This time I wanted to show how AI can sometimes be used to mislead people and how convincing it can be if you don't use real care.

Generated in Adobe Firefly using the text prompt:

"Closeup of young girl crying while cuddling puppy in boat while being rescued from flood"

Can you spot the errors? (See next page for results)

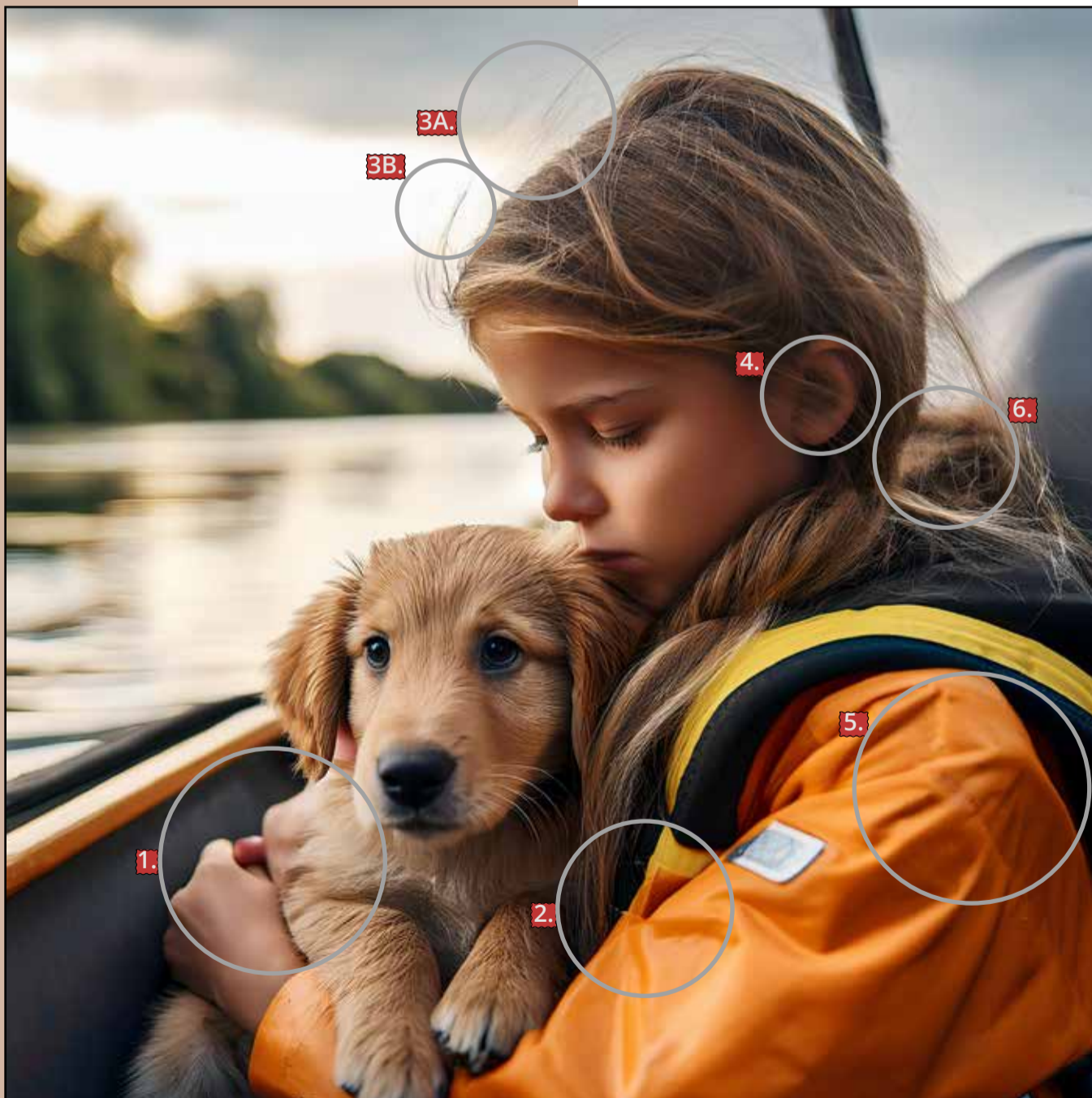


GIRL W/PUPPY ERRORS

The Results:

This image also generated fairly well so there are only some minimal errors.
Below you will find those areas circled (though there may be more that I didn't catch):

- 1. She has one hand seemingly around the dog and one further down. Where did that finger or thumb come from? None would/should be facing in that direction.
- 2. Her life jacket/safety vest seems to morph into the jacket itself. Also the life vest is the wrong color for what people are normally given in an emergency.
- 3. She has hair seemingly coming out of nowhere. Some may argue that the white light is obstructing seeing the rest but the other hair in that area is showing dark and visibly.
- 3A.
- 3B.
- 4. Her ear is lacking all detail, especially in relation to the level of detail in the rest of the image.
- 5. The wrong foreshortening seems to have been used compared to her size/shape and it looks like her shoulder is out of socket. This is a good example of the "Uncanny Valley".
- 6. Hair that looks matted compared to the rest and detached off in the background.



CONCLUSION

Wrapping Thing Up

When it comes to the internet, anyone can post anything and from anywhere in the world. While there are amazing people and friendships to be had, it is important to remember that sometimes people are not always what they seem. Strangers online can have all sorts of reasons to want to try to mislead you, ruin someone's reputation, misrepresent a certain event or try to gain attention for monetary reasons (sometimes in ways you may not realize).

The Golden Rule of the Internet is this:



Thank you for reading!

