

AI in Visual Art and Media

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Slide 1: Introduction

Hello, I am Jeffrey Willingham, and today I want to discuss AI, what it is, how it is used in the visual media field, and its effects are for everyone involved.

Slide 2: The definition of AI

Before we look at what Ai art is, we have to understand what AI itself is. AI is, as the Webster dictionary defines as:

A branch of computer science dealing with the simulation of intelligent behavior in computers.

OR

The capability of a machine to imitate intelligent human behavior.

The Artificial Intelligence we will be looking at is nowhere near the level of human intelligence. At some level, these AI programs require human input to function. Don't expect world domination from them.

Slide 3: Capabilities

AI right now is being used to create many amazing things that we couldn't have dreamt of years ago. Some of you may know about OpenAI, the creator of the very controversial ChatGPT. For those who don't, ChatGPT is a program that uses machine learning to generate an "original" piece of text from a simple user prompt.

Another technology is capable of using user prompts to create 2D images. They can replicate any style and create almost any image imaginable. Such programs are Midjourney and DALL-E 2, the latter of which is also developed by OpenAI. There are other programs that can replicate audio, such as VALL-E by Microsoft. Similar programs can do the same but with music.

The ones I have listed are far from the only AI generating programs out there. There are more than dozens for each of the uses I have mentioned. I would have analyzed them in this presentation if I didn't have a time limit.

Slide 4 - 6: AI art examples

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Here we have some examples of what the technology is capable of, specifically 2D images. The ones programs I will be displaying are Midjourney and DALL-E 2 as they are one of the most prominent programs out there and produce some of the best results, in my opinion.

Here we have the prompt:

"Deer, alone, forest, many trees, many shadows, small pond in background, lights pouring through leaves, dark, unreal engine style."

On the left we have Midjourney's product and on the right DALL-E-2. I used that exact prompt for both programs to compare the two. MJ (Midjourney) took a more stylistic approach, with simple shapes and exaggerated lighting. D (DALL-E 2) took a realistic route and made the images all photorealistic.

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Here we have two prompts, I won't say the full ones for time sakes, but we have an alien and a woman in blue robes. For the alien, MJ has more striking colors and shadows, with much more movement; D is much duller and stiffer all around. For the woman, MJ took a very European route for the style, which wasn't specified, and has very dramatic lighting to it; D took a much more faithful route regarding the prompt in my opinion. It has a very photoshoot vibe to the pieces.

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For the last two we have a cityscape and a robot. For both I wanted to do a 2D, anime like style for both. They both followed the prompt well enough, however I MJ produced the better results in my opinion. Its images are much cleaner and more detailed compared to DALL-Es. I feel D suffers when it comes to doing 2D style images; however it is still decent at doing photorealistic ones.

Slide 7: AI generated videos

Here we have some examples of AI generated videos. This is the Text-to-video program created by ModelScope. Here we have:

- A video of “A T-Rex running through the streets.” (Plays video) as you can see it is somewhat wonky, it looks like it is more so gliding than running. Despite that it's still incredible seeing this technology replicate videos.
- An “anime sword fight.” For this I wanted to see how well the technology would fair replicating a 2d animated style. You can see the two characters moving and “fighting” although it all looks very rough.

- This one actually uses the same prompt from before, regarding the deer. This barely has any movement happening; however, it is still interesting to see how the program translated the prompt.
- And here we have a video of “Santa eating a pizza.” I wanted to see how the program conceptualized well known characters. This one’s a bit more humorous compared to the others. It looks like he’s more so holding it out rather than eating it. Still a great piece.

A funny tidbit is if you look closely at them, especially the T-Rex video, you can see the faint outline of the Shutterstock logo, all of which are at the very same spot in each. This both shows where they got their dataset from and is a great example of how repetitive datasets can lead to very monotonous products.

Slide 8: The ethical issue

While this is a great piece of technology, it doesn’t come without its issues. One of its most major issues the developers and users of these programs have to deal with is copyright. As it currently stands, a piece created by an AI program cannot be copyrighted by its “creator”. AI works like “A Recent Entrance to Paradise” and “Zarya of the Dawn” were refused copyright since said pieces were not created by a person.

There are also concerns about how this technology would affect the art and graphic design field. This is a technology that, currently, can create 2D works that can be on par with certain artists. In a work culture where the product, and not the creator, is the biggest concern, this can be scary for many.

Others in the field are also furious with how these works are created. The technology takes images from around the internet, which usually includes images created by said artists.

Using these images, the programs are also able to recreate the style of artists to produce original pieces. Artists are deeming these practices immoral; however, they aren't illegal.

Despite that the programs are known to have the issue of not replicating the same emotions human made pieces are able to produce. The programs don't actually know what they are making; they just make amalgamations of other works.

Slide 9: Conclusion

The future of this technology is largely dependent on what laws are passed for them. Much of the legal work going on for the technology is behind closed doors, so we don't know much about where that direction is. If they restrict what images can be used and where the technology could be used can make this technology obsolete compared to actual artists. If they give the tech major freedoms with what it can take and where it can be utilized could mean running some artists out of business. I do think artists will always have a place, as they have specialized uses AI can't do. I do believe the technology is amazing and shouldn't be outright banned, however it should also be regulated and not be a stand in for artists.

Slide 10: Sources

And here are the sources.