### Dall-E 3 or MidJourney?

## Will AI Take Over the Worl





Al today is written by Cory Wright with Illustrations and photos provided by A. Machine

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What is AI?



Will AI Take Over the World?



Dall-E vs MidJourney



Prompt:



**Beyond Images** 





**Moving Pictures** 

What Does it All Mean?

As AI technologies are taking over, individuals and companies are trying to figure out what exactly AI is and how this technology can be incorporated into their day-to-day operations.

WHAT IS

Let's focus in on Generative AI. As the same suggests, Generative AI can generate new, original content such as text, images, audio, music or even video all with a simple\* user prompt. By using a source input such as text or an image, the generative AI has learned how to interpret that request by studying hundreds of thousands of pieces of data.

### Simple right?

Okay, let's break it down. Let's say you've never seen a horse before. At the beginning, you have no idea what a horse is. But then you are shown a handful of pictures of horses (maybe forced to watch a few episodes of Gunsmoke) and then asked to draw a horse. With your new-found knowledge of horses, you should now be able to replicate an original image of a horse.

Depending on your skills, it may not be the best image ever, but it probably generally looks like a horse. But don't feel bad that it isn't an exceptional piece of art, that is exactly how early forms of generated AI used to work, as well.

As machine learning algorithms, particularly deep learning neural networks, have become more sophisticated, so have the quality of content AI is able to produce. Modern algorithms, like Generative Adversarial Networks (GANs) are capable of analyzing and reproducing intricate details leading to more realistic images.

In essence, they have been taught what a horse is.

These GANs are not just using basic images to teach AI what something is, they are going much deeper by explaining every detail of the content. As large-scale datasets became more available, AI models are able to be trained on a much larger range of data.

Imagine you are that artist that could only draw a vague representation of a horse based on being shown several images. Now imagine you have been trained in art by the world's greatest artist. You have studied anatomy of horses, the history of every breed of horse, read every book every written-on horses, watched every episode of Gunsmoke, developed a deep understanding of color, lighting, shading and whatever the heck a forelock is.

You should now be able to create an original work of art that actually looks like a horse (or a person with a horse's head if that's what your asked to do, assuming you have also been taught everything there is to know about human anatomy, clothing types, race, religion, ethnic variations of features, and whatever they heck a popliteal space is.

This is what Generative AI is. As technology advances and the data sets used to teach AI grow, the output of the AI can become more sophisticated. AI is able to take what it has learned and not just deliver regurgitated responses but can use its knowledge to create original content that other wise didn't exist.

# Is AI just compilations of images across the Internet?

Not exactly. While AI is trained with images, it doesn't just search the Internet and morph different images together. AI simply learns from those images.

As with the horse example, AI has learned from these images, videos, audio files, and any other data that it is given.

Al can not only create images of horses, but also images of cats, dogs, even people. But it goes even beyond that.

Because AI can be taught almost anything, advancements in generative AI have been seen in writing, programming, audio and video. Just in the past year, AI has advanced in many of these areas to be almost unrecognizable from the real thing.

This, of course, is what scares people and companies from using AI. An advanced technology that can learn and "think"? A machine that can do computations faster than even the most brilliant scientist? A computer that can take over the world with just a prompt? It all may be more real than you think . . .

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# Will AI take over the world? and it probably already has

#### written by C. Wright illustrated by A. Machine

The original ideas of artificial intelligence can be traced back to the 1950s with Alan Turing's seminal paper "Computing Machinery and Intelligence", which proposed the concept of a machine that could simulate human intelligence.

Only 6 years later, the Dartmouth Conference coined the term "Artificial Intelligence" and proposed the ambitious goal of creating machines that could perform any task that required human intelligence. This idea set the tone for the conference and for much of the AI research to come.

In the decades that followed, several advancements in computer algorithms were achieved, but it wasn't until the 80s and 90s, with advancements in computer technology, that AI research shifted toward machine learning. Early AI relied on a rule-based system, or a series of if-then statements:

if (a user asks this question "What is the best episode of Gunsmoke?") { then (use this answer "Episode 124: Crowbait Bob") }

This approach limited the questions and answers to only those that had been inputted into the system.

Machine learning, on the other hand, meant that algorithms could teach computers, not

just tell them what to do. This learned approach allowed the machines to not only learn, but take things one step further and make predictions based on that knowledge.

The machines could analyze the data they had been taught and output not just canned answers, but completely original responses based on ALL the data they learned.

YOU: What is the best episode of Gunsmoke? AI: Based on a quick search, here's what I found.

Determining the "best" episode of "Gunsmoke" is subjective and varies among fans and critics. However, fan ratings on IMDb provide insight into some of the most popular episodes of the series:

. . . .

Each of these episodes reflects a blend of compelling storytelling, memorable characters, and the unique Western ambiance that "Gunsmoke" is known for. While "The Gallows" stands out with the highest rating, the appeal of each episode can vary based on individual preferences for storylines and characters.



Modern AI can not only come up with more detailed, original answers, but it is able to use real language to answer. Modern AI, especially machine learning and deep learning models, can learn from data, adapt over time, and make decisions or predictions based on their learning.

### Okay, so how is this going to take over the world?

Slowly, and a little bit sneaky, AI has already infiltrated our everyday live, often in ways that many people may not immediately recognize.

Smartphones, social media, online shopping and even banks already use Al on a regular basis. Smartphones use voice assistants like Siri or Alexa, facial recognition, predictive text and autocorrect, all powered by Al.

Social media and online shops like Amazon use predictive AI to analyze user behavior and give feedback and purchase suggestions based on that data. Essentially learning what and how a user uses the site and modifying the experience to best suit that user.

Banks use AI in fraud protection by automatically analyzing patterns in spending to detect possible fraud. Even the police are starting to use AI to track criminal activity, types of crimes, activity of known criminals; all to determine where a crime might occur or who may be the culprit.

While that sounds like the making of a hit Tom Cruise movie, the exciting reality is that because the AI can input and analyze data much faster and more efficient than a human, and with new models that allow AI to use that data to predict behavior, it is within the realm of possibility that AI won't just be creating images for an online shop, but will be able to predict crime or cure diseases and eventually, take over the world!

Okay, maybe a bit dramatic. This isn't the first time technology has threatened to take over, not just the world, but more importantly, jobs.

#### But is AI going after everyone's jobs? Are we all going to soon be serving our AI overlords to do their bidding?

Throughout history, the threat of new technologies doing just this has been present. From the industrial revolution where development of new technologies led to machines that could automate everyday tasks. While this saw the loss of some job sectors, ultimately, entirely new jobs and industries were created.

Smartphones, social media, online shopping and even banks already use AI on a regular basis. AI is not about taking over the world or replacing people, it is about enhancing their abilities in the workplace

While the automobile industry in the early 20th century and the rise of the personal computer did cause the loss of certain jobs as well, it also created millions more. These new jobs not only needed skilled workers, but new teachers to teach the technology, new manufacturing techniques and plants to build it, creating entirely new industries in software development, IT, R&D, and even call center services to aid people using the new tech.

The introduction of computer applications like Photoshop in the late 1980s and early 1990s also caused some concern among traditional artists and photographers. The main worries were around the potential for these digital tools to replace traditional art skills and techniques, and the fear that digital art might devalue or overshadow traditional art forms.

However, over time, many artists came to embrace digital tools as an extension of their creative toolkit. Photoshop and similar applications offered new possibilities for creativity and artistic expression, allowing artists to experiment with techniques and effects that were difficult or impossible to achieve with traditional mediums. The digital art field grew into a significant industry, creating new job opportunities in areas like graphic design, digital illustration, film, and gaming.

While there was an initial period of adjustment and skepticism, Photoshop and other digital art tools eventually became widely accepted and integrated into the art world, complementing rather than replacing traditional artistic skills.

That is how AI should be approached. Not feared as a replacement of human workers, but as a compliment to what we already do. Another tool to help automate mundane tasks. Give guidance to questions that might otherwise take time, and company money, to answer. Or even to create product images out of thin air that save on photo-shoots, product purchases, photographer fees, models, locations, finishing and editing.

Al can help a company achieve their goals in a more efficient, timely and costly manner.

From a business perspective AI can assist in design, editing, development, writing, research and even video and sound design. These technologies are advancing everyday, and the possibilities of AI for a businesses growth and efficiency are endless.

Al can create artwork, but also give inspiration to an artist. It can edit an article, but also research the web for ideas. It can analyze code for a website, or assist in writing an all new feature that would have taken weeks to figure out.

The key is learning how AI can help

a business flourish. Taking the tools that are available and giving them to employees to use.

Al is not there to take over, but to take part of the workload that will let workers focus on what truly matters-their expertise and creativity. By automating routine and data-intensive tasks, AI frees up time for staff to engage in more complex, strategic activities that require human judgment and innovative thinking. This collaboration between human and artificial intelligence can lead to increased efficiency, improved decision-making, and enhanced customer experiences. In the end, AI empowers businesses to not only achieve their goals more effectively but also to foster a more dynamic and innovative workplace environment. AI is not about taking over the world or replacing people, it is about enhancing their abilities in the workplace.



#### THIS FALL, SPARKS ARE GOING TO FLY!

### how i met your **motherboard**

### Dall-E 3

In the world of Generative Image AI, there are many applications to choose from. But two of the most popular in my book are MidJourney and Dall-E 3. Each has their strong suits, and each has their downfalls. But in the past year, both have advanced way beyond what I would have ever thought a computer could create from nothing, and in the year, months, weeks even to follow, they will keep getting better.

> Each of these images was created using the same prompt. Dall-E 3 on the left, and MidJourney on the right.

While both create stunning images, you can notice some differences.

Dall-E 3 tends to 'listen' to a prompt a bit better than MJ; especially complex ones. An elongated cartoon character in Dall-E, actually looks like what was asked, Whereas MidJourney did the opposite. Both are in New York and have donuts, but MJ had some interesting ideas of where to put the donuts.

## MidJourney

MidJourney tends to create more photo-realistic images. Able to create fine details, and more realistic features.

MJ also creates more dynamic lighting. Understanding complex lighting structure and shadows.

Where Dall-E shines, however, is with the text. As seen in the bottom two images, the one on the left actually was able to create the requested words. While the MidJourney images, did produce letters, but only a random string of gibberish.

So which is better? Who wins the competition? it really depends on your needs.



MidJourney Model v3. Released July 2022

# prompt: An elegant portrait of a very distinguished cowboy

With this very simple prompt, AI can create something beautiful. Or, at least it can now. But what a difference a year makes. Way way back in 2022, for the oldies in the audience, a little thing called MidJourney v3 was released. This, as the name implies, was the 3rd version of the model, creating what you see above. While this was a huge step in generative AI, compared to the modern, much more sophisticated models, it looks like a cave painting. While it took forever for AI to improve, it finally made leaps and bounds in the year that followed



MidJourney Model v5.2. Released June 2023

Fast forward to the modern times almost a whole year later, and we get MidJourney v5.2. This was a slight step up in the quality over version 3. Able to refine some of the features of the cowboy, and the models new understanding of rhine stones really made all the difference.

All jokes aside, it is amazing to think that in just eleven months, generative AI went from a vaguely impressionistic version of a person, to a photo-realistic, barely-distinguishable-from-thereal-thing image.

Able to understand not just simple commands and shapes, but complex lighting structures,

wrinkles, skin texture, hair. Millions of finite details all put together in less than a minute.

This, of course, is why AI scares so many people. The ability to create such an image without a photographer, model, lighting technician, wardrobe and hours upon hours of post work. Something that used to take an entire day or more to setup and get the perfect shot can now be done in a matter of minutes.

While this does change things, it is a change that needs to be embraced. Al isn't going anywhere, in fact, it is only going to get better, so hold on, because imagine what another year will bring.

# BEYOND IMAGES

While images are one of the most used forms of AI along with text creation, more and more areas of production, marketing, finance, programming, and day-to-day operations are being aided by AI.

Here are just a few examples of possible uses of AI. While some of these are still in early stages, and may not be ready for primetime, the speed at which AI is moving means they will be very soon.

One area that is emerging quickly, but hasn't been included here is video creation. While this is becoming something that can definitely be useful, I will explore these options later.



### Audio

New AI technologies have made great strides in the creation of instrumental and vocal music. What used to be, just a few months ago, a garbled mess of sounds is quickly becoming a usable, alternate medium to paying for stock music.

#### USE CASE

Sound Effects - Gun shots, horse gallops, babbling brooks. All kinds of sounds can be made instantly and different versions can be created just as fast to get that perfect sound effect.

Music - Completely original background music for commercials or long-form production.



### World Class Vocalization

Vocal technologies in AI have also come a long way and are close to becoming a usable tool in production.

With tools like voice cloning, text to voice, and voice to voice, AI can now perform a variety of different functions in a variety of different purposes.

#### Listen to Sample

In the above sample, a popular western star can be brought back to life with a few clicks of the mouse. Of course, this is where legal and ethical considerations need to be taken into account.

#### USE CASE

Create quick voiceovers on the fly for scratch audio to get timing correct.

With permission, use old voices in a new way for various promotions.

Good reads - Use western inspired voices to read website articles that users can listen to.

### Intelligent Code

AI can not only create visual and audible material, it can also work behind the scenes to create and analyze programming languages. While some applications such as GitHub already include AI code assistance, other large language models can also help to detect issues or write complete code with a developer guiding it along. AI becomes the developers assistant, performing tasks that might otherwise take hours to complete. This allows the developer to focus on the overall goal of the code.

#### USE CASE

Test and expand code - Simple pasting in snippets of existing code, the AI can analyze it and tell the developer what could be causing an issue in seconds. This saves the developer hours of guess working going through the code line by line.

Create new website plugins or animations that a developer might not have the knowledge, or time, to create.



As with other AI in recent months, AI video has made extreme strides in terms of quality and usability. While there is still a little work to be done, AI video could soon become an integral part of a production workflow.

While there are a few categories when we talk about AI and video. One, which is already built into some sites and software, is the ability for AI to edit the video. To take clips from existing video and put it together. Automatically removing certain aspect of the videos as specified by the user, combining similar videos, even if shot at different times based on simple text prompts. Not to mention smart color, smart titles and enhanced audio.

But there is another side to the Al video spectrum. Completely Al generated video. This is a video clip that is created completely out of only a text prompt or a still image. The user merely telling the Al what they want to see and Al, using its vast learning, creates a full video.

At the time of this writing, these videos are short (about 5 seconds) and not quiet ready for full production use. However, also at the time of writing this, several AI companies have announced models that produce much more fluent, longer videos.

Adobe has announced built in tools to its production suite to use AI to remove or add objects into videos all with a simple click and a prompt. What used to take hours of special effect work, can now, or soon, be done in seconds.

Al video will open new avenues for production. Allowing for highly detailed special effects and edits to be done for a fraction of the cost and time. Video producers will be able to spend more time being creative and less time adjusting each frame. ■





While AI has become an **extremely powerful** form of computing, it is important that individuals and especially businesses do not shy away from embracing this technology.

The important thing is for a company to study the advancing AI tech and deploy ways that it can fit into their business model and help not only their employees do their work more efficiently, but also to help the company save money and time; not by eliminating employees in place of machines, but by making their jobs more efficient.

Al is a tool, and just like any tool it is designed to make things easier. Sure, Al can do a lot more than a simple hammer could ever do, unless that hammer could swing itself and hit the nail on the head every time. But, as is with Al, the intelligent hammer still needs a human to set up the nails.

People are an intricate part to the use of AI. While AI CAN create astonishing images, writings, audio and video, it still needs a person guiding it along. It still needs the human touch to produce the desired results, and even then, needs refinement.

Al can do a lot, and the advancements in technology are making it so artificial intelligence is getting smarter by the day. Which means that if a company doesn't research and deploy effective use of Al, it may get left behind. Implementing the right tools, gives everyone from developers to artists to administrative assistants, a leg up in their profession. Not all Al is right for every company, or every employee, but with the vast amount of new tools at the disposal of everyone who can create an account, there is sure to something for everyone to make an aspect of their job more efficient.

Al isn't about taking over the world, but those who ignore it risk being left behind.