Allovus

Design: Adobe Illustrator

Our exploration into AI-driven design tools, and ways they can help in our day-to-day

Consumer vs. professional needs

First things first: AI features are capturing the imagination of general consumers and design professionals alike. For this exercise, we sought clarity on whether Adobe's AI capabilities **within Adobe Illustrator** could help us streamline efforts in our Design Studio when faced with common tasks we perform in the course of a design project. These tasks would be considered "professional" in nature and have relevancy to designers who use these tools to make a living.

Consider this a work in progress... a living document that we'll add to in the months ahead, and share our findings with you as we go.

AI image generated with Chat GPT 4
Prompt: a modern, flat graphic image that represents vector artwork design with muted colors

What and who is this research for?

This resource is crafted for design professionals, small-scale product teams, and UI/UX designers.

We set out to learn if AI features within Adobe help us….

- Save time?
- Generate useable ideas and concepts?
- Provide a head start in production by providing digital or vector-based art that is simpler to update than starting from scratch?
- And of course... can AI within Adobe Illustrator help us edit AI-based images from other apps?

Design professionals

Professional designers with 3+ years of experience using industry-standard apps creating solutions for clients.

How Adobe currently fits within our Studio

One of the core service offerings within our

In a simplified way, we use Figma to create the

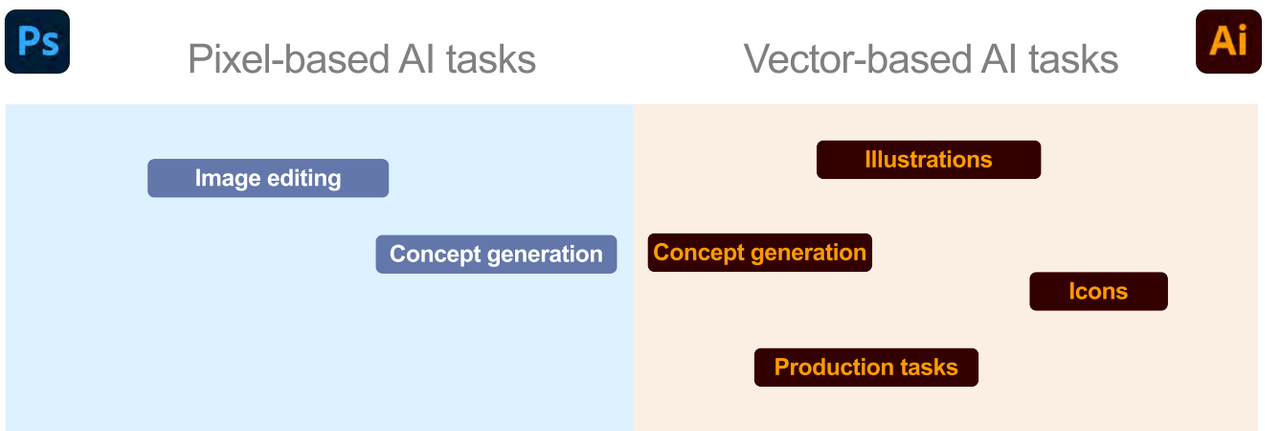
Studio is the creation of conceptual workflows for applications. For a large portion of the work, we rely on Figma. From black and white, low-fidelity wireframes through high-fidelity final output and prototypes, this application provides the framework we rely on.

However, we prefer to use Adobe products to create and edit custom images, icons, and illustrations. The Adobe tools are robust and comprehensive, allowing us to modify pixel-based images in Photoshop, and create custom icons or illustrations in their vector-based Illustrator program.

frames and “wrapper” that contains the messaging and actions a user undertakes throughout the course of a journey.

Customized elements we import into these flows include:

- **Images:** Photographic visuals - realistic
- **Illustrations:** Expressive, creative visuals - stylized, conceptual images that fit within a brand look and feel
- **Icons:** Smaller, simplified images that represent an idea or aid the user in wayfinding



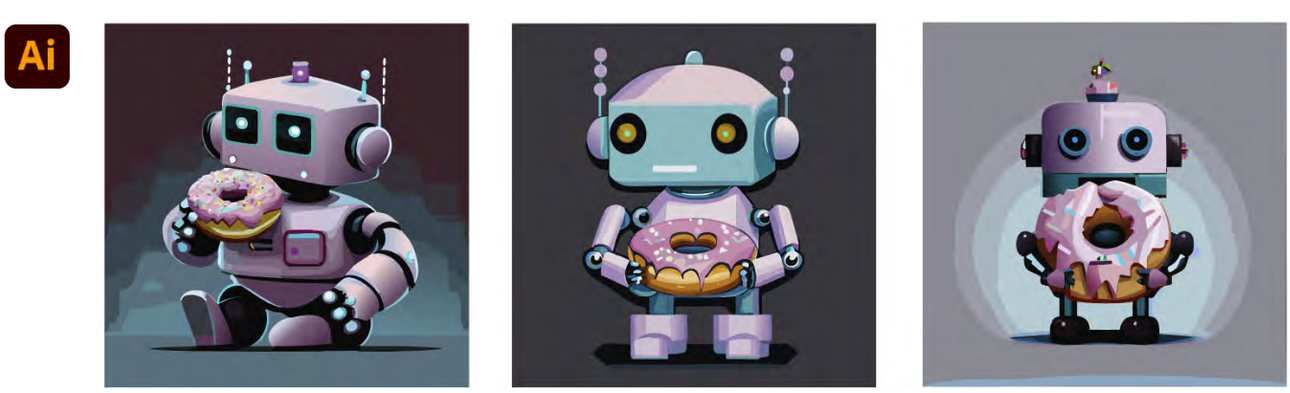
*Tasks we use adobe products for within our Studio workflow.

1 Ideas and concept generation

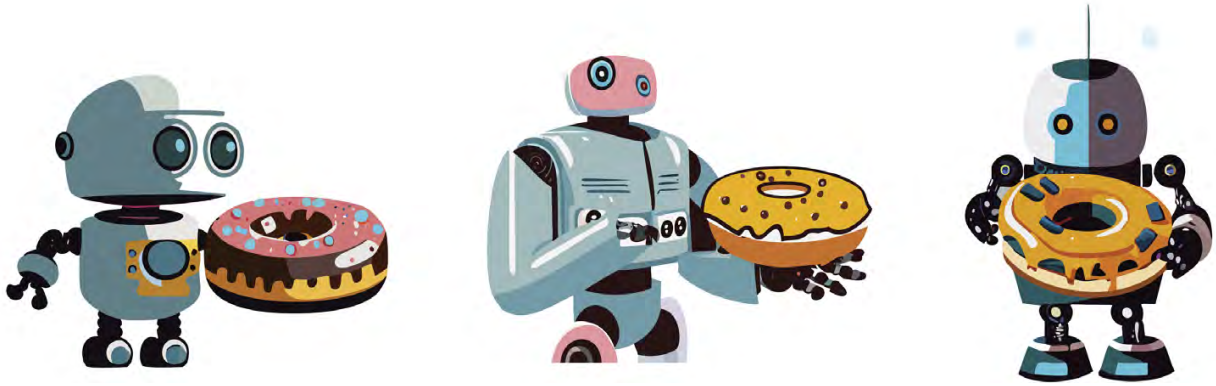
Let’s start with the Engine: **Adobe Firefly** is the AI engine that fuels AI-based features within Adobe Illustrator, and is a stand-alone text-to-image generator as well.

Within Illustrator, a user can describe an image they would like to create, and Firefly provides 3 variations at a time. This is similar to other AI generators on the surface. However, Adobe has based much of their engine’s references on their Adobe stock library. As a result, Firefly’s results tend to skew toward photographic realism.

Firefly does not reference the entire web for inspiration, so does not provide the range of ideas and styles offered by other image generators. Additionally, the level of detail within their images is looser and not as detailed as other AI-based generators we reviewed. The amount of detail can be adjusted within the app, but we are using default settings for this review.



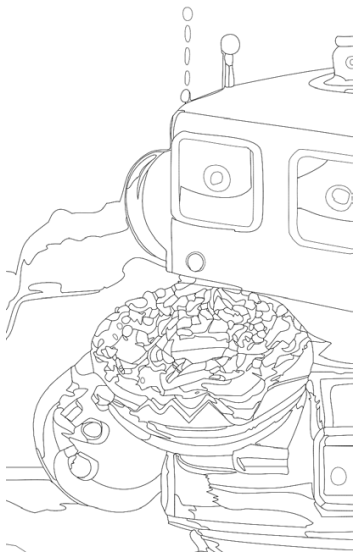
Prompt, 1st round: Robot eating a donut.



Prompt, 2nd round: Robot eating a donut.

A few observations:

- **Style and variation:** The first round of robots generated are actually quite similar: Square(ish) head, simple gray bodies, donut in front. The second set is a bit more simplified. Stylistically, all images are a bit “blobby” and impressionistic - as if based on a loose jpeg vectorization.
- **Conceptual variation:** The first image generated in upper left comes the closest to the request of a robot eating a donut. At first glance, these seem good. However, we asked for a robot EATING a donut - most of these are holding the donut. Additionally, they seem to be a bit stiff - there doesn’t seem to be much motion or fluidity.
- **Execution + details:** The eyes aren’t linear and precise. The outer squared eye frames are a bit rough, and the hands appear impressionistic.

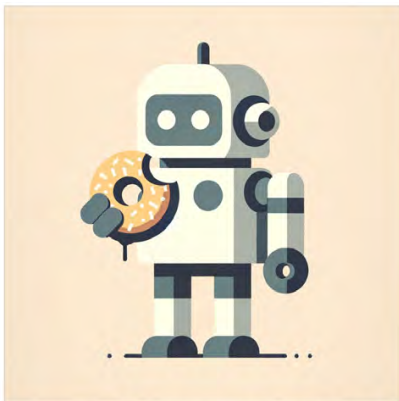


- **Layers:** Well... there aren’t any. The images are provided in a single layer, and composed as if an image has been traced within Illustrator. The vector elements are placed side-by-side, like pieces in a puzzle.
- **Colors:** Identical colors aren’t grouped, which would enable the designer to more simply select and change the same color throughout the image (vs. individually).

ChatGPT-4

ChatGPT-4 provides entirely different results. In a short amount of time, we were able to generate many different options based on the same prompt. Objectively, these solutions provided:

- A greater range of



concepts
- More stylistic variations
- Far more detail
- Very precise renditions

Additionally, an example of the dialogue ChatGPT-4 provides is helpful in understanding what criteria and language it used to inspire the image. It helps the user learn to provide better prompts when refining their requests.

I've created a minimalist and graphic illustration of a robot eating a donut, focusing on a one-dimensional, flat design style with muted colors. This serene depiction emphasizes simplicity and calmness.

Prompt: steampunk variation.

2 Generation and style consistency: Complex

One of the greatest benefits Illustrator could provide would be creating a NEW image that is consistent with an existing style. Illustrator makes it possible to match a company's brand standards. Designers create new visuals and concepts that fit within these existing systems. Can Illustrator give us a head start in these efforts? Lets review a few examples:

This image was created by ChatGPT-4. starting with this image, we are able to import it into Illustrator and sample the image style and color using the style picker.

Prompt: Recreate image.
Note: This was a default prompt in the generate tool within Illustrator.

2nd Prompt: Recreate image.
Note: This was generated on another art board on a different date. Colors and style are clearly based on the original - but the AI doesn't seem to recognize the desired subject matter.

What if we sample the image using the style picker and provide the same prompt used to create the original image? This might produce a similar outcome....

Prompt: Create a Dr. Seuss style image of a winding road leading into the distance with a big number 15. Trees in the style of Dr. Seuss illustrations line the road. A character/person is walking along the road with their back to the camera.

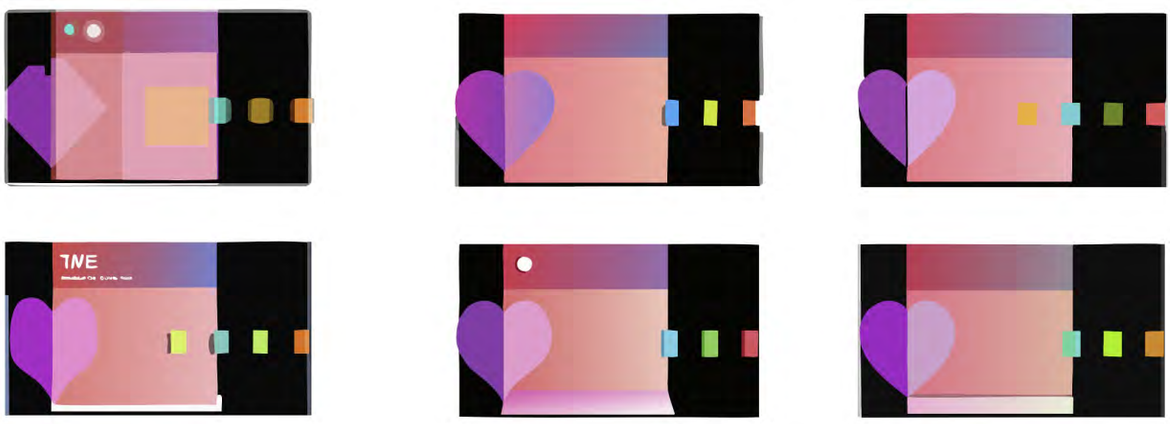
Result: After a lot of experimentation within Adobe Firefly, Photoshop and Illustrator, these results seem typical. The AI and style picker do a good job of replicating the color palette, but struggle grasping the style. Additionally, typographic representations of the #15 are amateur at best. Other generators do a much better job with typography, while Adobe seems to "represent" the number vs. truly understanding it or basing it accurately on existing fonts. Finally, the conceptual representations clearly skew toward the literal interpretations of roads and trees, possibly a result of Firefly leveraging Adobe Stock. Compared to other generators, the AI lacks imagination.

3 Generation and style consistency: simpler elements and concepts

Lets work with a few simpler images, and see if Adobe Illustrator can help us create consistent elements when we start with an existing Illustrator vector image (vs. an imported jpeg image).

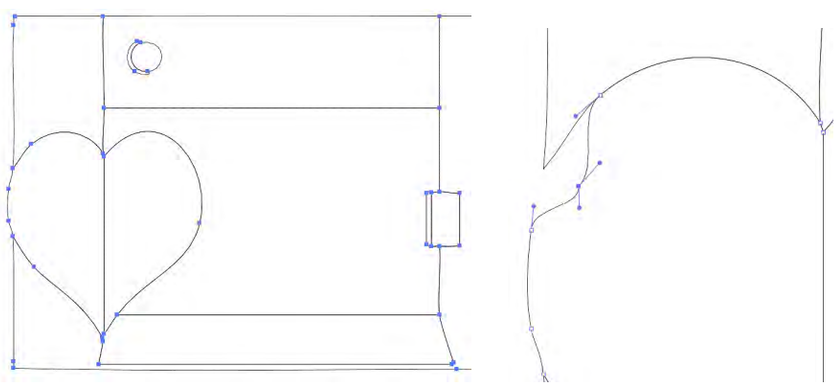
Original image: The original represents the top portion of a phone, with a heart shape and multi-colored squares floating above the surface. This image was created in Illustrator.

Even if Illustrator couldn't replicate the image, it would save time if it could generate the shapes in vector (which could be used to compose the illustration).



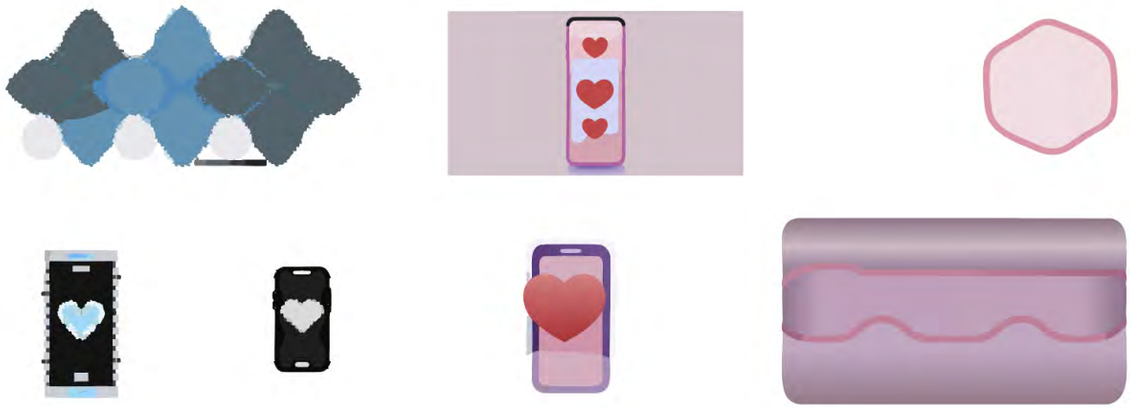
Prompt: Recreate image.

Result: Well.... visuals are more representational than identical. The AI got the colors somewhat correct, and seemed to grasp the small squares floating and drop shadows... but it's not accurate, and the shapes created are challenging from a production aspect. See below:



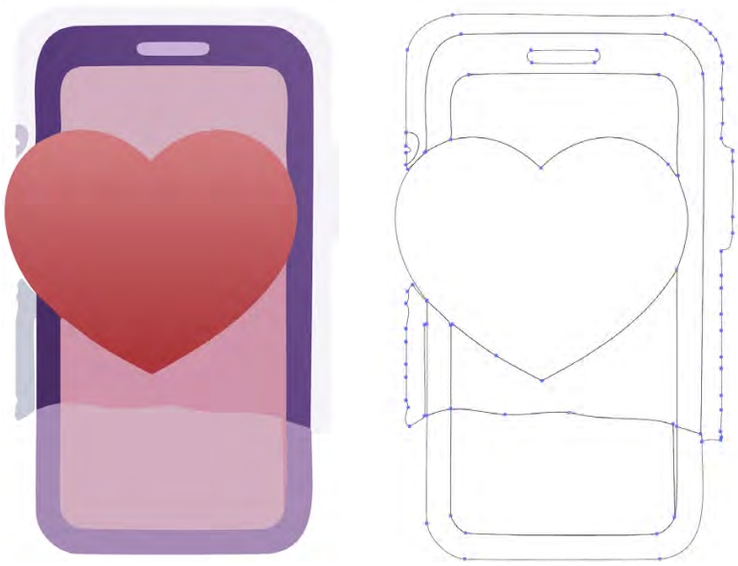
- **Precision:** Not so much... the tool isn't simplifying and optimizing the shapes. There are extra anchor points, and the heart shape is butted up against the surrounding elements (vs overlaying it on a separate layer).
- **Colors:** Color is ok for a first pass, and similar to the original.

What if we sample the image using the style picker and provide a descriptive prompt to attempt to replicate the image?



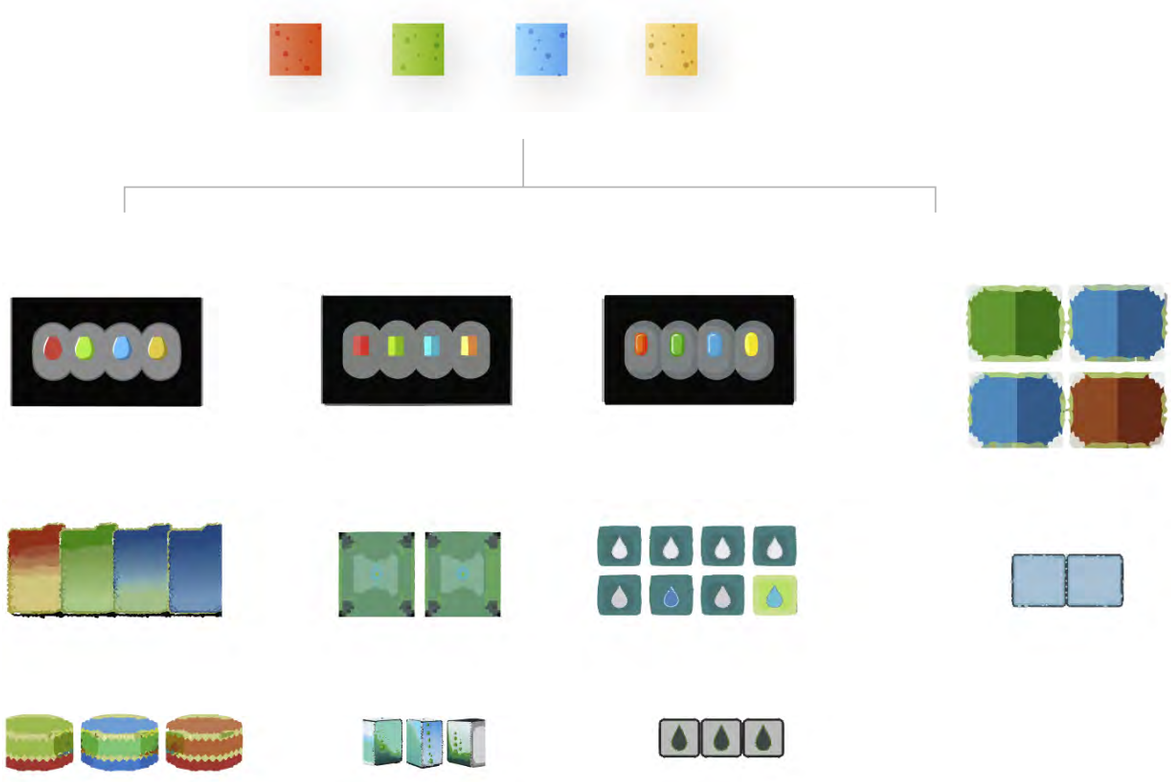
Prompt: Show the top portion of a phone with a heart shape and multi-colored squares floating above the surface off the right side of the phone.

Result: Well.... the results are erratic.



- **Precision:** The heart and phone shape are promising, but a closer inspection shows inconsistencies and far too many vector points.

Let's try a small portion of the design:



Prompt (after sampling the original image for style): Show 4 multi-colored squares in a horizontal row placed against a white background with a drop shadow.

Result: Disappointing. The AI seems to be having a difficult time interpreting my request.

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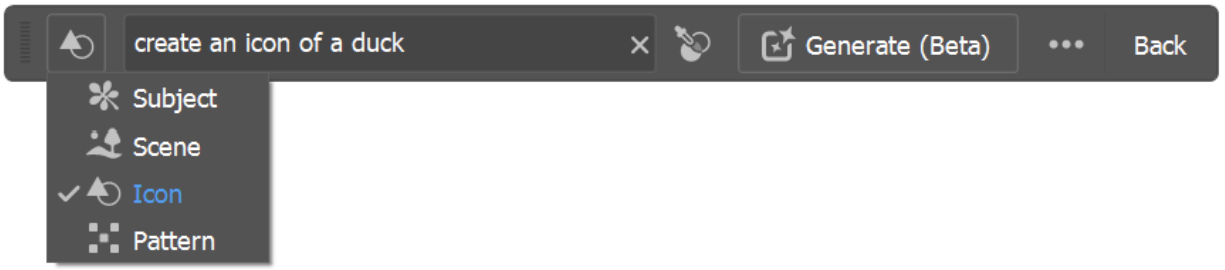
4 Iconography

Within Adobe Illustrator's AI generation control, the user can set the "type" of image generation they are requesting. Options include Subject, Scene, Icon, or Pattern. Objectively, this gives the AI a head start by signaling which category the image will fall in. For comparison, we'll include options generated from ChatGPT-4 as well (both tools using the same prompt).

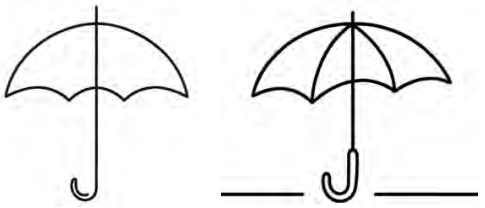
For these tests, the "Icon" filter was selected within Illustrator.

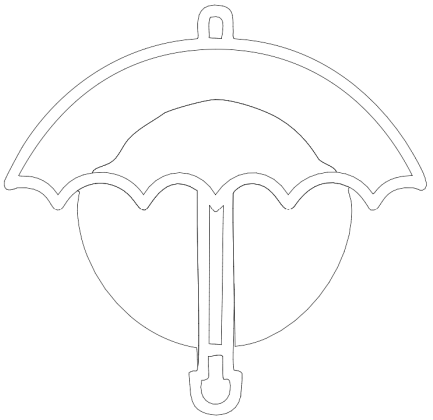


Adobe Illustrator

Prompt: create a monoline icon of an umbrella.

Chat GPT-4





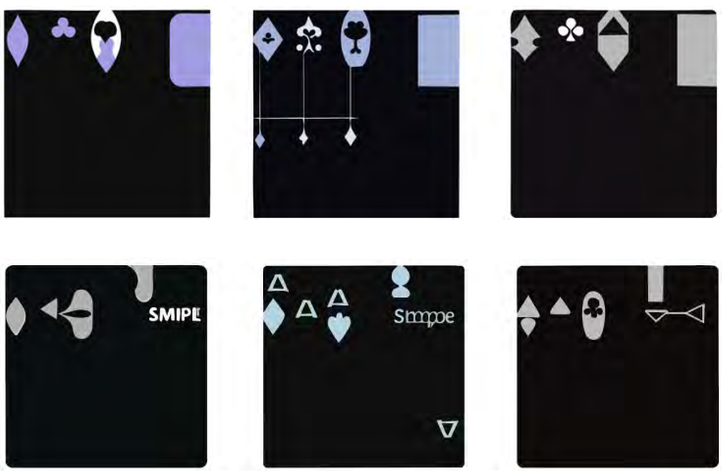
Detail: The construction of the umbrella is odd in several ways:

- The interior circular mass/shape has no purpose
- The image is imprecise - edges aren't straight and curves aren't optimized
- **And...** why not provide a monoline icon as a single line, vs. an already outlined shape? As a single line, the designer could easily modify the image and change the line width.

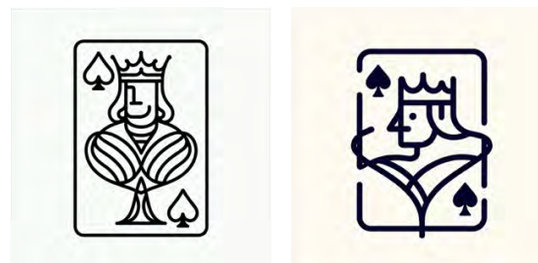
Prompt: create an icon with a monoline style of an umbrella in the rain - keep it simple.

Result: Request confused the AI.

Prompt: create an icon with a monoline style of a king of spades playing card - keep it simple.



Result: Request confused the AI. Note the insertion of the word "simple" as a result of the prompt.



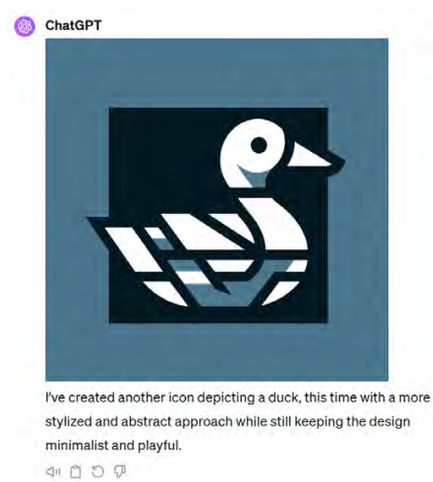
Prompt: create an icon of a duck.

Result: Request confused the AI.

Idea: As I was in the "Icon" category already, maybe my prompt should be simplified?

Prompt: a duck

Result: Request confused the AI.



Result: In addition to the generated icons, note the summary ChatGPT-4 provides. This

helps the user understand the reasoning behind the image style provided, as well as acting as a guide for selecting revised descriptors for the next prompt.

5 Takeaways

Our goal in conducting these AI explorations was to determine if AI can help in our current Studio workflow. From generating ideas to saving time in production, Adobe is uniquely positioned to add an incredible amount of efficiency within existing tools that professional designers leverage daily.

These are early days regarding AI, and things are moving quickly. Adobe's first pass at integrating AI within Illustrator is clearly a beta version, and says as much in the tool. We'll look for improvements in the months ahead. That being said, at this point the AI capabilities seem very erratic and not helpful for our professional tasks.

Key takeaways:

1. **Saving time:** At this point, the answer is no, not really. From conceptual ideation and image generation to production, the AI features and capabilities within Adobe Illustrator would not save our team time.
2. **Generating concepts:** The Firefly engine doesn't understand prompts as well as others. This makes it difficult to provide instructions that produce a consistent or expected outcome. Images are more literal and less imaginative as a result. Additionally, many of the images appear to have been generated by tracing a jpeg image.
3. **Simplifying production:** The vector assets created by the AI generator are not optimized for simplicity, accuracy or ease of modification. At this point, the assets created will not save the design professional time as they strive to create clean, optimized vector images.

There is huge potential for Adobe products to provide a simpler path for ideation, image generation, and conversion to vector art. Unfortunately, these beta features aren't yet optimized to the point of being really useful in our project workflow. For now, we'll leverage other AI engines for conceptualization and style variations, and import the images into Illustrator or Photoshop for refinement and customization.

Resources:

Video: The END for designers and illustrators...

This 7-minute video is well worth the time to review. Kaleb Gonyea is a professional designer/illustrator and walks the user through Illustrator's capabilities while addressing the fear of "Will AI replace us?"