Allovus

Design: Adobe Photoshop

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

Consumer vs. professional needs

First things first: Al 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 Photoshop 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.



Al image generated with Chat GPT 4 *Prompt:* iconographic image of a UX designer working, with a modern flat style

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 ideas and concepts? • Provide a head start by providing digital or vector-based art that is simpler to update than starting from scratch?
- And of course... Can AI within Adobe help us edit other AI-based images from other apps?

Design professionals

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



Ps	Pixel-based AI tasks	Vector-based	Al tasks	
	Image editing Concept generation	Illustratio Concept generation	ns	
			Icons Production tasks	

*Specific examples for each task detailed below.

How Adobe currently fits within our Studio

One of the core service offerings within our 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 pixelbased images in Photoshop, and create custom icons or illustrations in their vector-based Illustrator program.

In a simplified way, we use Figma to create the 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.



Ideas and concept generation

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

Within Photoshop, a user can describe an image they would like to create, and Firefly provides 4 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 be clearly photographic/realistic in nature.

Firefly does not reference the entire web for inspiration, so does not provide the range of ideas and styles provided 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.



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.



Prompt: Make it more fun and less literal.



OK, same fun level, but use this description: Create a whimsical style image of a winding road leading into the distance with a big number 15. Imaginative, organic, make-believe trees line the road. A character/person is walking

Suggestions To Refresh





along the road with their back to the camera.





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
- Very imaginative
- interpretations of trees More stylistic variations
- Much better typography
- for the number "15" Far more detail

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.

In summary, we use these tools to generate ideas that inform our final creative solutions. Adobe's solution seems several steps behind others we have used.



ChatGPT

This image depicts a stylized, colorful landscape with a winding road. The scenery includes rounded hills and a variety of trees in different shapes and autumnal colors. A figure on a bicycle appears on the road, and there are road signs displaying the numbers "15" and "1," possibly indicating speed limits or markers for distance. The use of color and the whimsical nature of the illustration give it a storybook quality, evoking a sense of peacefulness and a leisurely journey through a picturesque countryside. The overall aesthetic is reminiscent of an animated film or a children's book illustration.

Basic image editing

OK, Let's cover the basics: Photoshop does an excellent job generating missing areas. This is a legitimate benefit of their AI, saving a tremendous amount of time recreating backgrounds. Let's consider this a simple task:

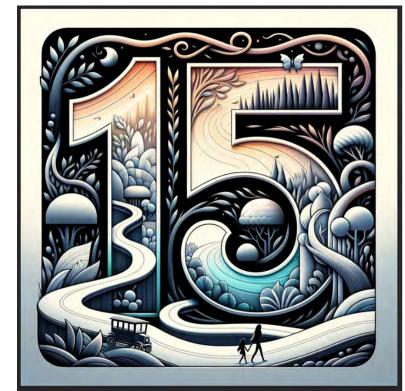


Result: Photoshop did a nice job filling in the blank and extending the image horizontally.



Conceptual image editing

Let's try something harder, involving an image we created using ChatGPT-4. Can Adobe Photoshop "fill in blanks" when the request is more specific and less general?



Original: version on left.



Prompt: More people on the path - same style. Result: Path elements are twisted and "squishy' looking - perhaps my prompt was inadequate? I tried again, below:



Prompt: Add more people on the path - same style.



Prompt: 2 more people walking.



Prompt: Add a dog.



Prompt: 2 more people walking.

Result: Photoshop/Firefly adds generated images as layers, so modifications don't degrade the base image.

The additions seem "smeary" and representational, vs. accurate and consistent with the original image style.

Note the dog, and the spider-like representation of 2 people walking.



Prompt: Change to number 7.



Result: This prompt resulted in two versions of the number 3, and one version of the number 7.

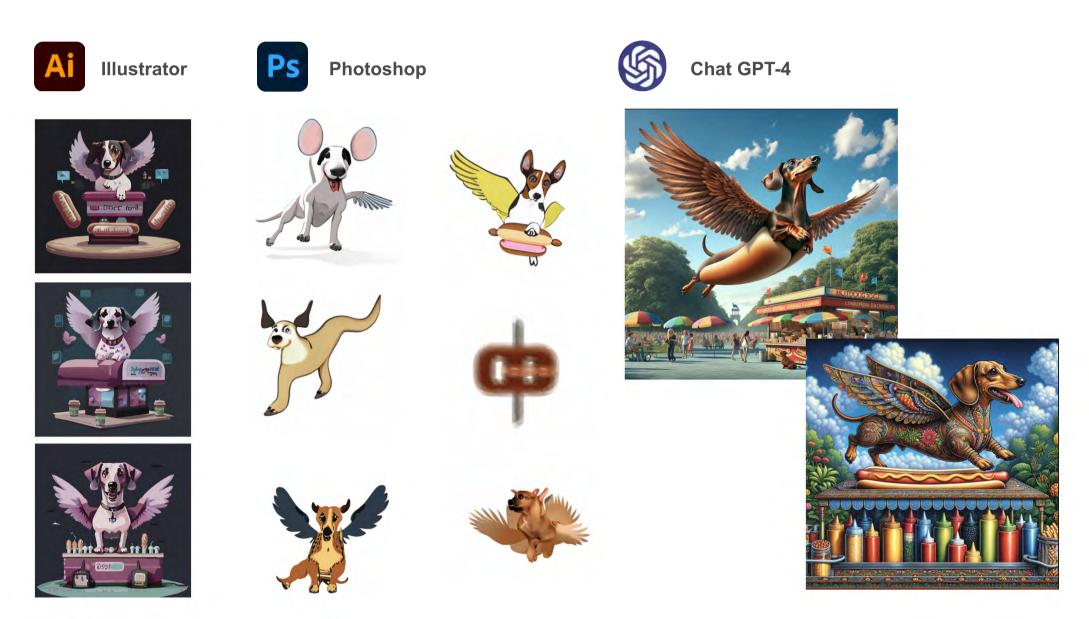
Note that Adobe is struggling to capture the intricate style within the letterforms, as well as the shape of the numbers. The second number 3 seems to be melting, and the number 7 has very little detail within the number at all. these still seem "representational" in practice.

In these cases, the AI generation isn't helping the designer modify a base image in a convincing way.



Conceptual image generation

Adobe's ads for this capability seem amazing - almost magic. Let's try a few random requests below to see if text-based image generation within Photoshop delivers a desirable outcome.



Adobe Firefly



Prompt: All four apps were provided the same prompt: A dachshund with wings flying over a hotdog stand.



Result:

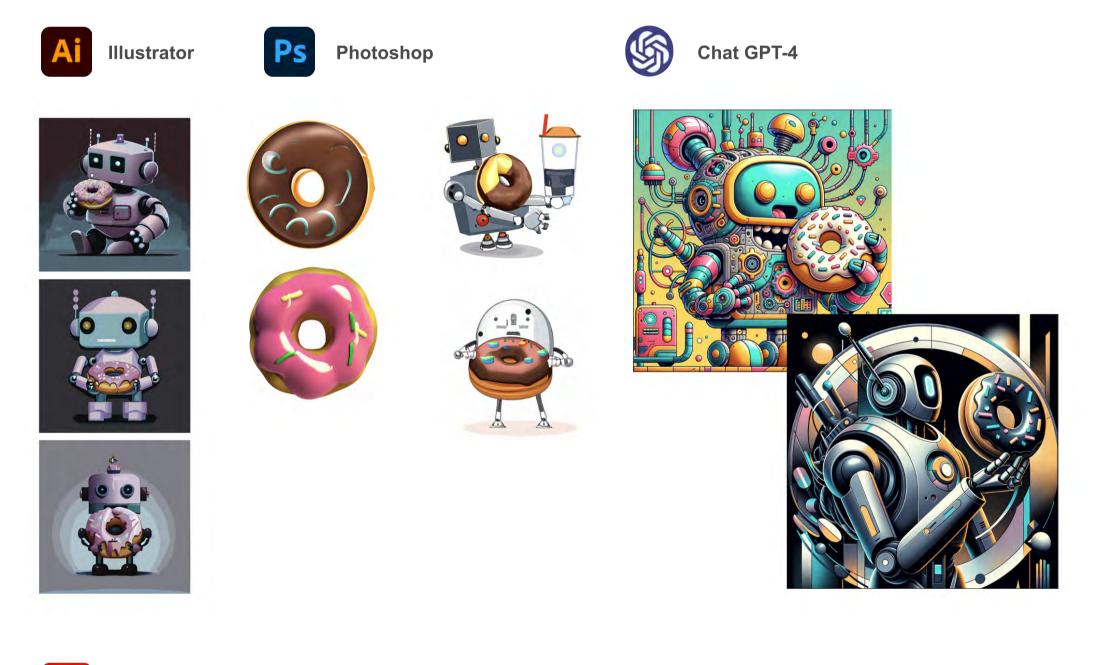
Adobe illustrator: Simple approach, dog from waist up - same basic perspective and layout above a small stand. These tend to be simple and representational as well.

Adobe Photoshop: Highly representational images that seem "smeary" and overly simplified.

ChatGPT-4: Lots of detail, good variation of perspective, some whimsy in putting a dog on an actual bun, two very different illustrative styles provided. Further explorations provided many other conceptual and stylistic options.

Adobe Firefly: When using the app directly, it provided better options than Photoshop. That being said, all 4 versions are very similar in pose and foreshortening. Also, note that the backgrounds tend to be suggestive, vs. detailed. See image close-up at left (what is that flying thing, anyway?)

Let's try again, with another imaginative topic: A Robot eating a donut.



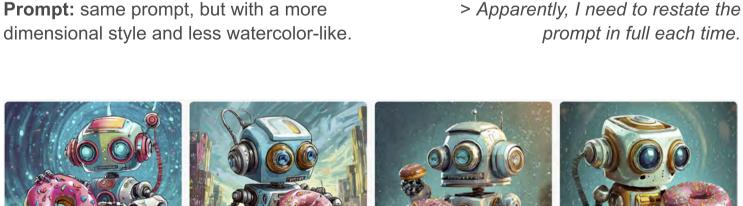
Adobe Firefly



Prompt: Robot eating a donut.



Prompt: same prompt, but with a more



Prompt: Robot eating a donut in a fun, whimsical 3-Dimensional style.

This time, let's start with a simple photo of a dog:

Result:

Mixed: Starting with the basic image of the dog in the upper left corner, the prompts were simple:

- Add a cat
- Add a parrot • Add a dog

For these tasks, Photoshop was fine. Note that the cat also looks a bit terrified or worried.

However, when asked to add a "Dog Crossing" sign, the AI clearly struggled. What appears to be a hockey player holding a stick is probably based on images the AI reviewed of a person walking a dog (holding a leash). The blue sign is also less than ideal, in spelling and execution.





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 Al within Photoshop is clearly a beta version, and says as much in the tool. Clearly improvements will come 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. 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. 2. The engine is based on Adobe stock vs. scanning the entire web. Images are more literal and
- less imaginative as a result.
- 3. The images provided seem vague and "smudgy" at times. Details in images don't have clarity and definition, and seem to be "representational" in nature.
- 4. Removing and extending backgrounds works amazingly well, and saves time.

For now, we'll leverage other AI engines for conceptualization and style variations, and import the images into Photoshop for pixel-based refinement and customization.

Result:

Adobe illustrator: Same basic robot, very similar perspective and approach - simple, not too many details or style variations.

Adobe Photoshop: Still struggling a bit - note the simple donuts without a robot. Conceptually, we do like the two robot versions, as they are a bit fun and loose.

ChatGPT-4: Lots of detail, good variation of perspective, style and tone. This engine works great with text input and "understanding" what the user is seeking.

Adobe Firefly: Like Illustrator, it produced very similar robot shapes and perspective. Similar styles for first and third request, even when asking for a 3dimensional style.

Note the similarity of robots for both sets - it almost seems as if the references for what a good robot COULD look like are limited.