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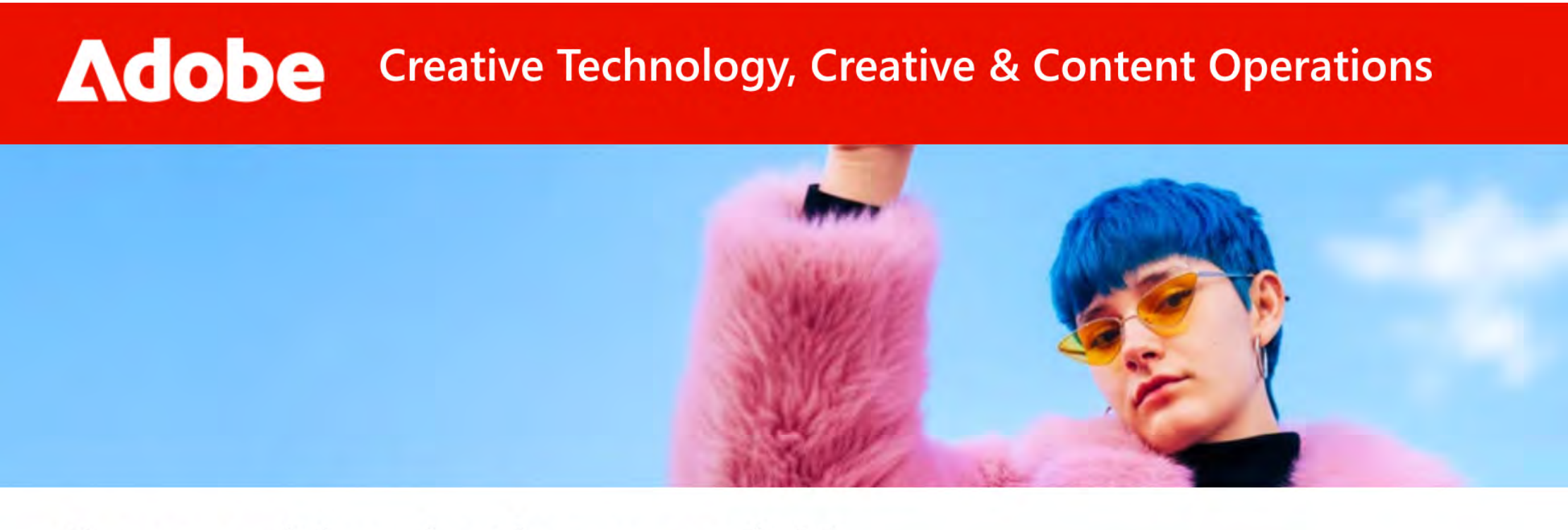

Compositing in the age of AI

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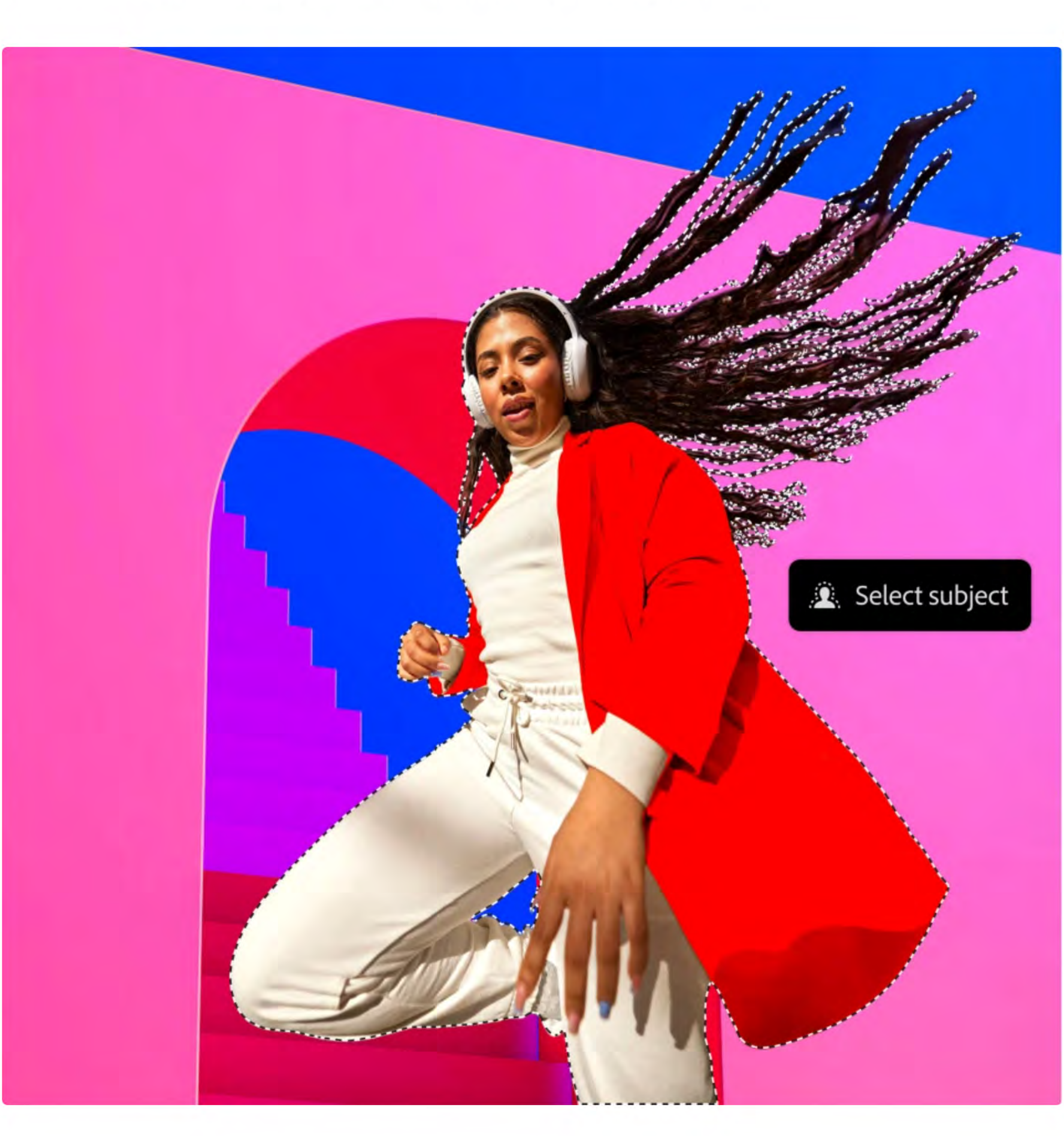
Every composite begins with intent — and usually a few constraints.

For Adobe associate creative director Sheila Vu, constraints might include a stock photo with complex hair, a background that doesn't fit the format, or an image that needs to move beyond realism into something more expressive. Not long ago, solving those problems meant hours of careful manual work. Now, much of that effort happens in seconds.

"When I make composite images, I use AI features in Photoshop for production tasks — masking, selecting subjects, extending backgrounds," Vu says. "Stuff that would take a long time and be painful without AI."

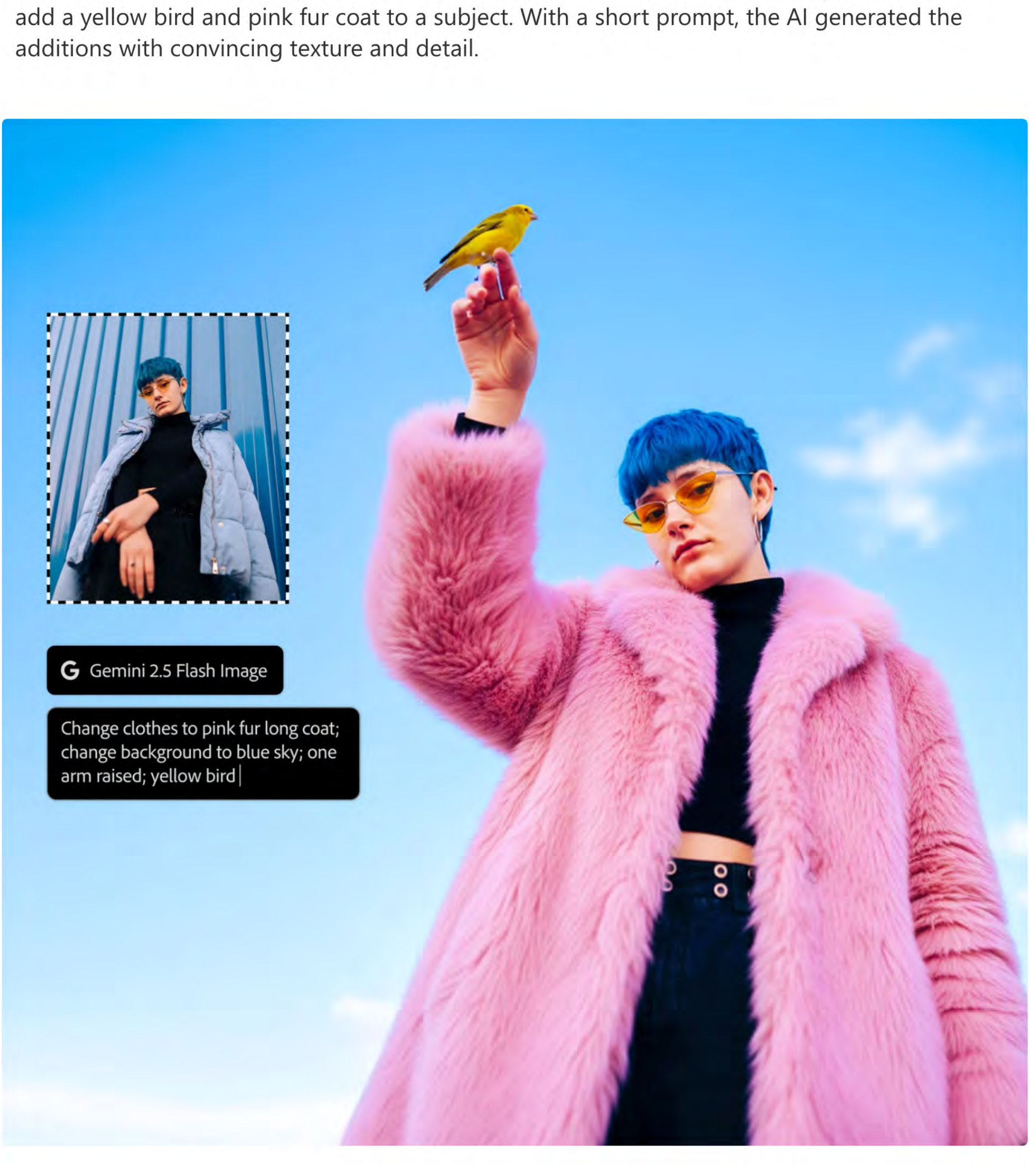
Removing friction, not judgment.

Hair selection is a familiar pain point. In one stock image Vu worked with, the subject's hair would have been a challenge to isolate manually. Select Subject in Photoshop handled nearly the entire selection in a single click. Vu made only minor adjustments.



That pattern repeats throughout her workflow. AI doesn't decide what the image should be. It clears the path to get there.

Generative Fill in Photoshop has expanded that freedom further. For one image, Vu wanted to add a yellow bird and pink fur coat to a subject. With a short prompt, the AI generated the additions with convincing texture and detail.

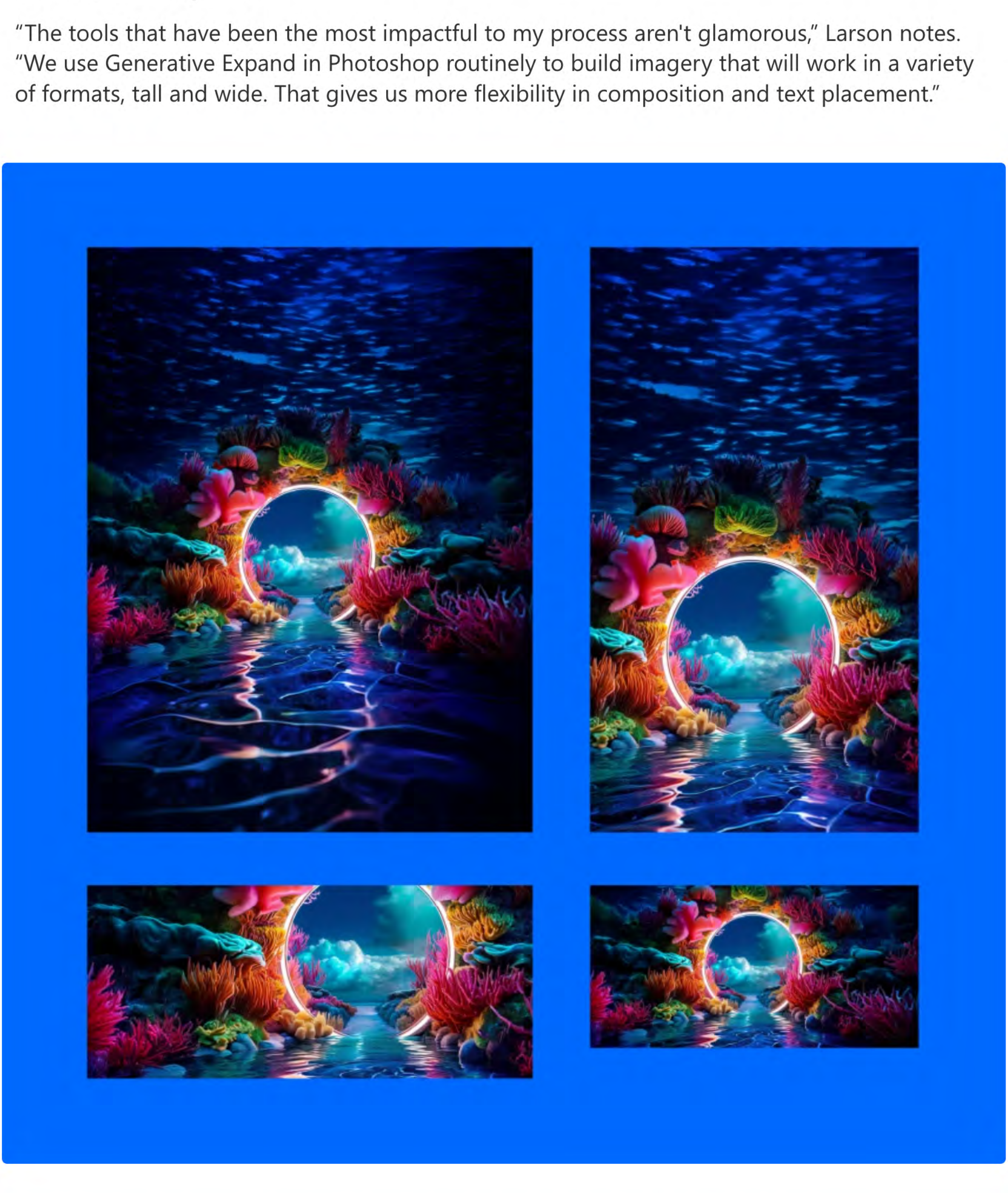


Change clothes to pink fur long coat; change background to blue sky; one arm raised; yellow bird

Because that particular image promoted the partner models in Photoshop, Vu was able to use the Gemini model. "It did such a great job," she says. Adobe managing creative director E Larson agrees. "Sometimes partner model results will be a little off or a little bit different, but in this example, Gemini matched the model really well. It looks like the same person, the same body."

Create, then expand.

"The tools that have been the most impactful to my process aren't glamorous," Larson notes. "We use Generative Expand in Photoshop routinely to build imagery that will work in a variety of formats, tall and wide. That gives us more flexibility in composition and text placement."



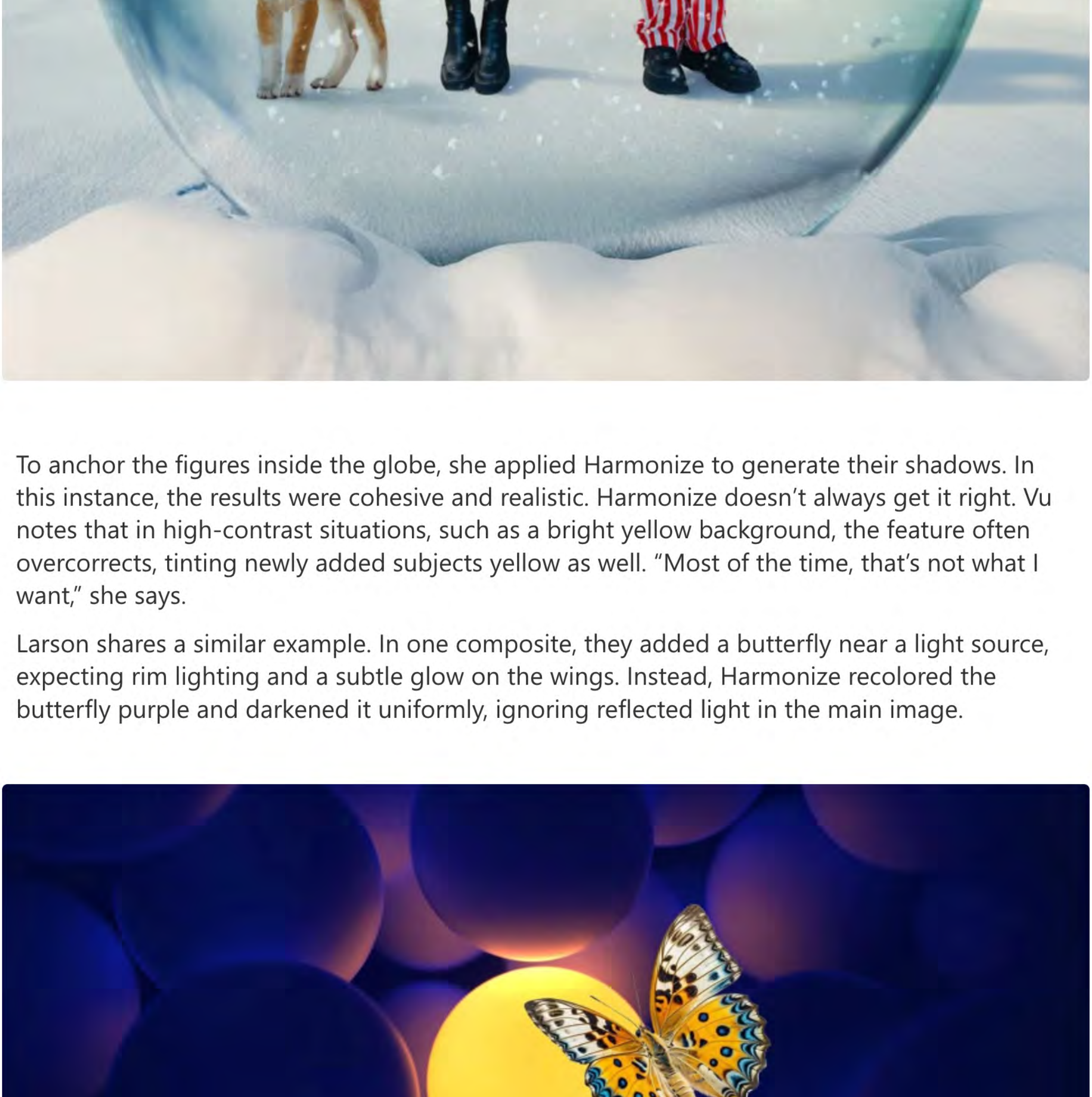
Limitations remain. While expanded areas aren't yet high resolution, they hold up at the viewing sizes typical for release marketing.

"It's going to be such a game changer when the areas we expand with Generative Fill are high resolution," Larson says. "We'll be able to use those images literally everywhere."

Build believability, one layer at a time.

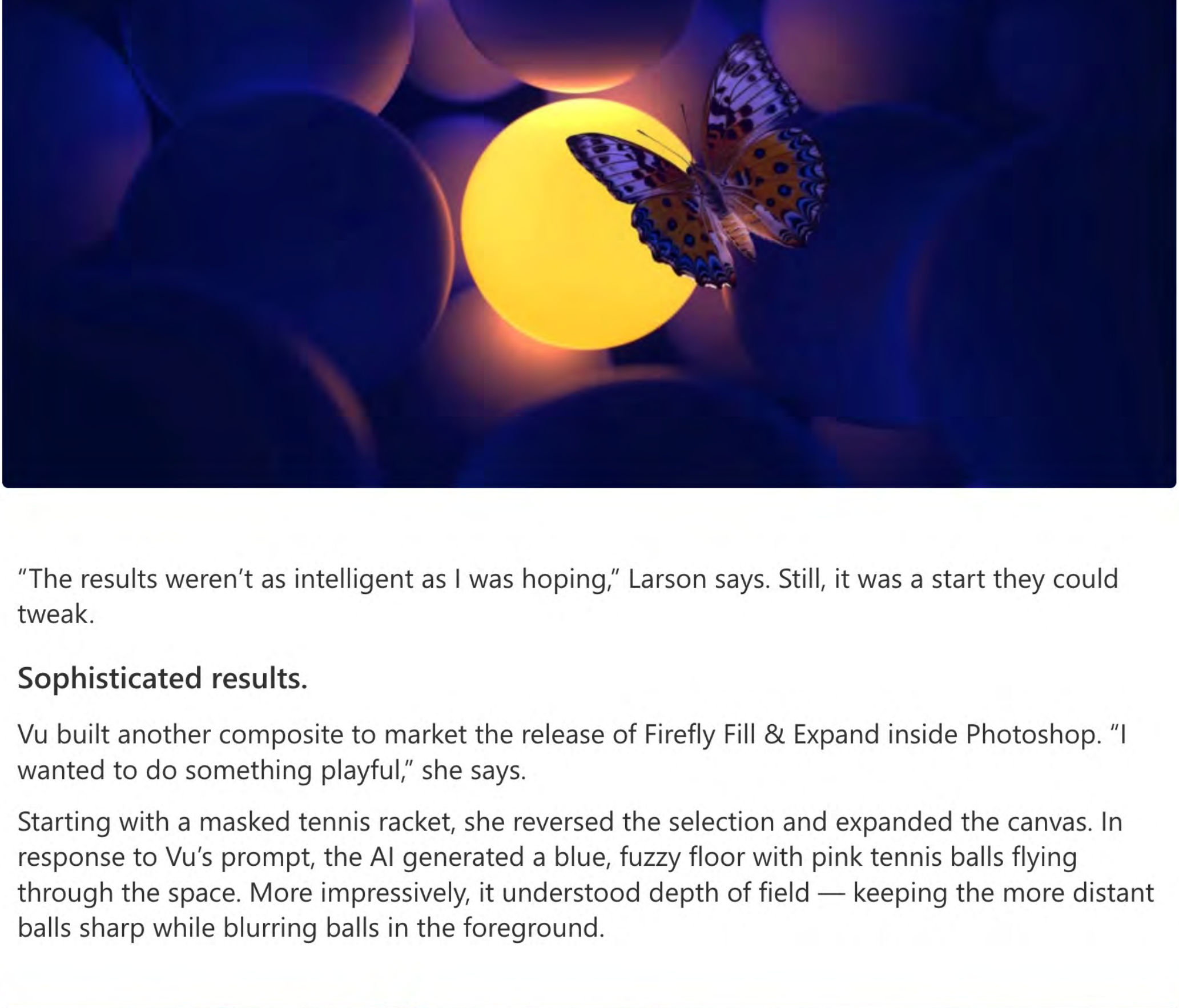
Vu's composites often combine several source photographs. One marketing visual is composed of four distinct assets: a dog, a background, a snow globe, and a pair of people.

Using Select Subject, she isolated the dog and the people and placed them in a snowy landscape. After masking and blending the snow globe, she used Generative Fill to add snow in the foreground.



To anchor the figures inside the globe, she applied Harmonize to generate their shadows. In this instance, the results were cohesive and realistic. Harmonize doesn't always get it right. Vu notes that in high-contrast situations, such as a bright yellow background, the feature often overcorrects, tinting newly added subjects yellow as well. "Most of the time, that's not what I want," she says.

Larson shares a similar example. In one composite, they added a butterfly near a light source, expecting rim lighting and a subtle glow on the wings. Instead, Harmonize recolored the butterfly purple and darkened it uniformly, ignoring reflected light in the main image.

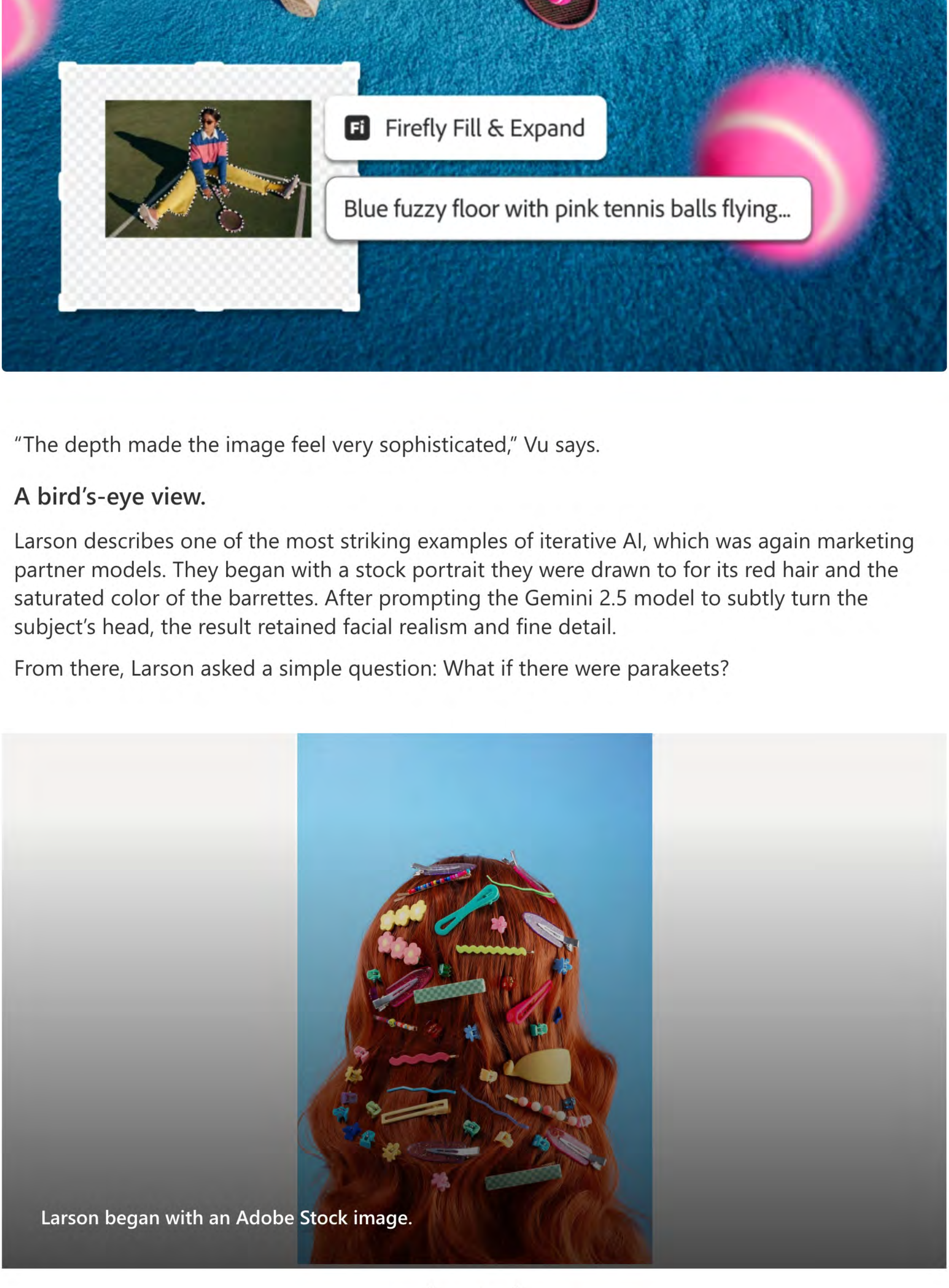


"The results weren't as intelligent as I was hoping," Larson says. Still, it was a start they could tweak.

Sophisticated results.

Vu built another composite to market the release of Firefly Fill & Expand inside Photoshop. "I wanted to do something playful," she says.

Starting with a masked tennis racket, she reversed the selection and expanded the canvas. In response to Vu's prompt, the AI generated a blue, fuzzy floor with pink tennis balls flying through the space. More impressively, it understood depth of field — keeping the more distant balls sharp while blurring balls in the foreground.



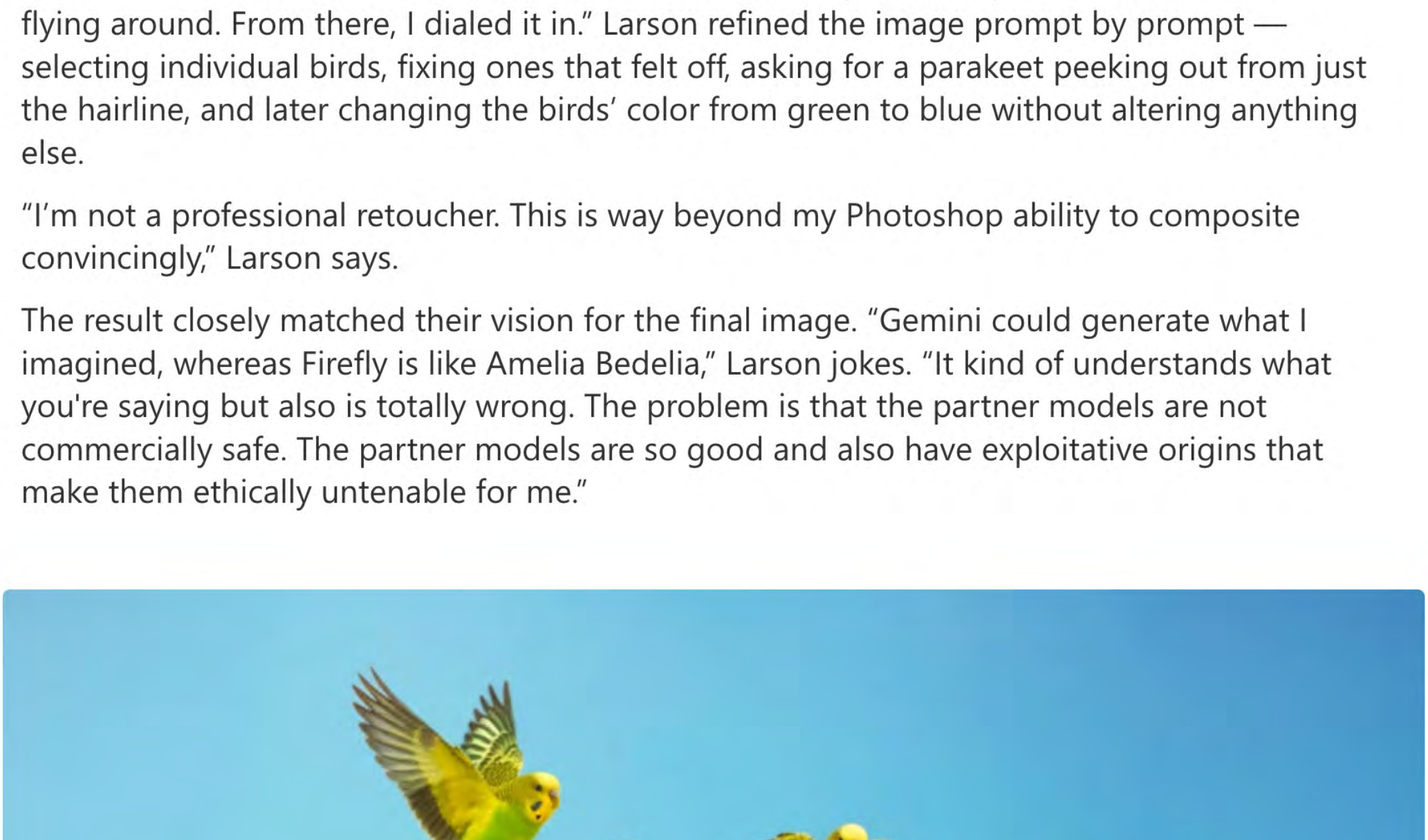
Blue fuzzy floor with pink tennis balls flying...

"The depth made the image feel very sophisticated," Vu says.

A bird's-eye view.

Larson describes one of the most striking examples of iterative AI, which was again marketing partner models. They began with a stock portrait they were drawn to for its red hair and the saturated color of the barrettes. After prompting the Gemini 2.5 model to subtly turn the subject's head, the result retained facial realism and fine detail.

From there, Larson asked a simple question: What if there were parakeets?



Larson began with an Adobe Stock image.

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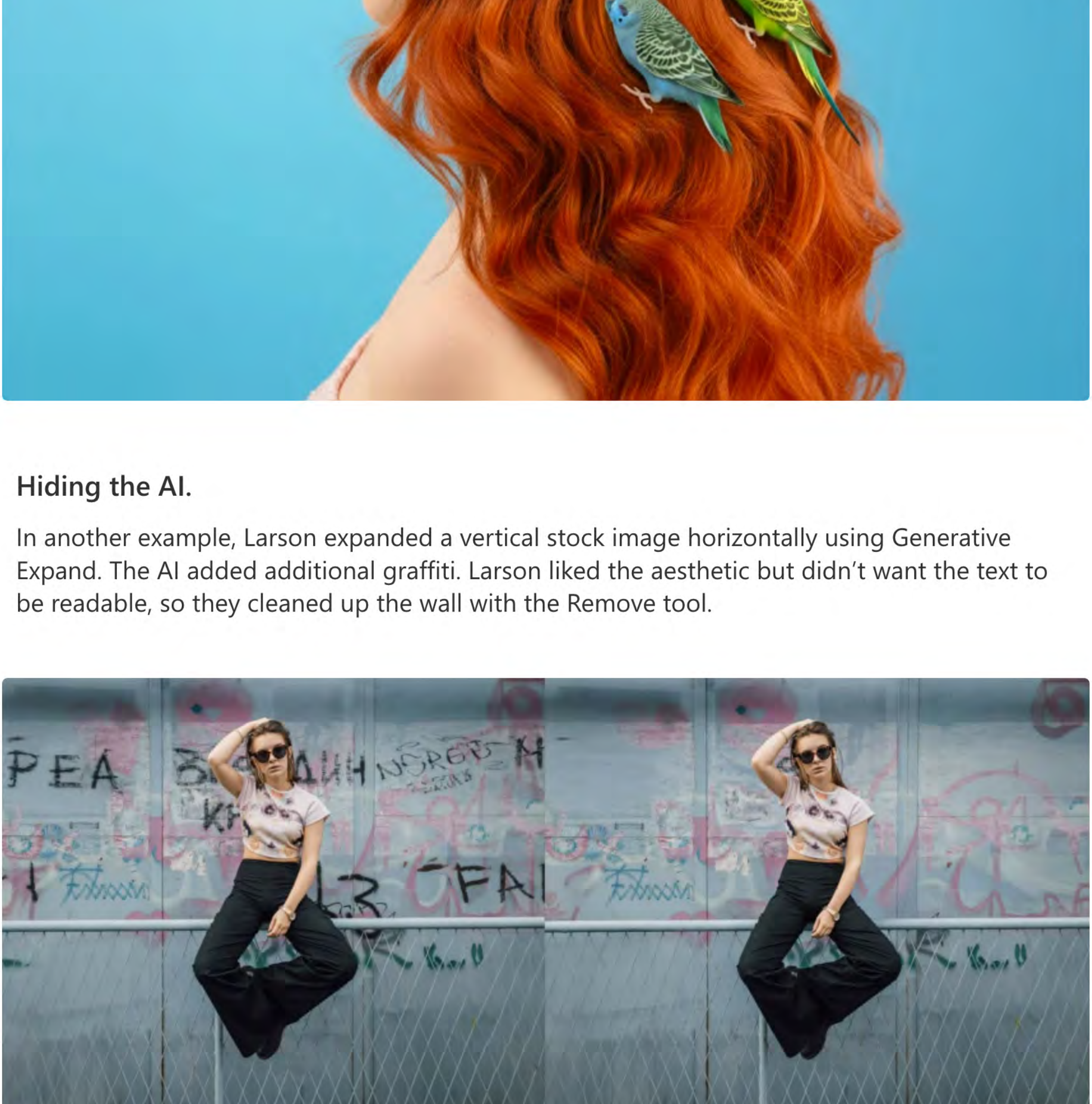
"I instructed the model to remove the barrettes and add parakeets perched in her hair and flying around. From there, I dialed it in." Larson refined the image prompt by prompt — selecting individual birds, fixing ones that felt off, asking for a parakeet peeking out from just the hairline, and later changing the birds' color from green to blue without altering anything else.

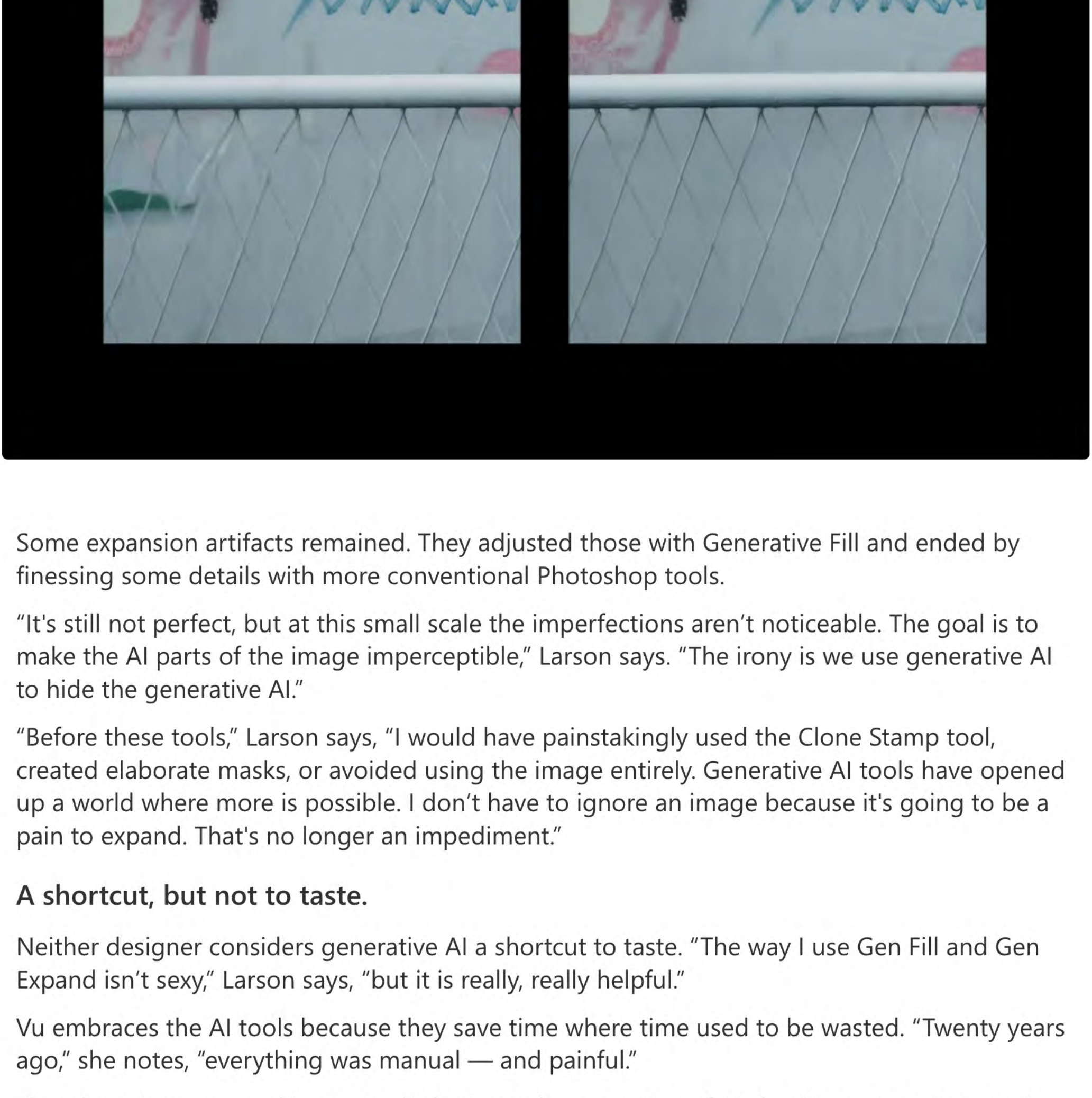
"I'm not a professional retoucher. This is way beyond my Photoshop ability to composite convincingly," Larson says.

The result closely matched their vision for the final image. "Gemini could generate what I imagined, whereas Firefly is like Amelia Bedelia," Larson jokes. "It kind of understands what you're saying but also is totally wrong. The problem is that the partner models are not commercially safe. The partner models are so good and also have exploitative origins that make them ethically untenable for me."



Hiding the AI.

In another example, Larson expanded a vertical stock image horizontally using Generative Expand. The AI added additional graffiti. Larson liked the aesthetic but didn't want the text to be readable, so they cleaned up the wall with the Remove tool.



Some expansion artifacts remained. They adjusted those with Generative Fill and ended by finessing some details with more conventional Photoshop tools.

"It's still not perfect, but at this small scale the imperfections aren't noticeable. The goal is to make the AI parts of the image imperceptible," Larson says. "The irony is we use generative AI to hide the generative AI."

"Before these tools," Larson says, "I would have painstakingly used the Clone Stamp tool, created elaborate masks, or avoided using the image entirely. Generative AI tools have opened up a world where more is possible. I don't have to ignore an image because it's going to be a pain to expand. That's no longer an impediment."

A shortcut, but not to taste.

Neither designer considers generative AI a shortcut to taste. "The way I use Gen Fill and Gen Expand isn't sexy," Larson says, "but it is really, really helpful."

Vu embraces the AI tools because they save time where time used to be wasted. "Twenty years ago," she notes, "everything was manual — and painful."

That doesn't mean anything goes. "I don't condone creation of AI slop," Larson says. But using AI in service of a human vision is welcome. Asked how much quicker AI makes compositing, they don't hesitate: "Hours and hours."

Photoshop remains the starting point.

Both designers are clear about one thing: They don't start in firefly.adobe.com.

"I think Firefly stuff looks like Firefly stuff," Larson says. For creative professionals marketing Photoshop itself, that's a problem.

Vu agrees. "To create images that are true to the Photoshop and Adobe brand styles, I need to do the compositing," she says. The point is layers — conceptual layers as much as literal ones. "It's not just one prompt in Firefly."

Larson frames it another way: "Words are futile devices for describing imagery. I think of compositing like I'm making a diorama and placing all of these parts and pieces in the scene. My job is to make the new objects look at home. Describing that process with a text prompt is really hard."

Even the strongest model output is only one ingredient. The art is the assembly, the refinement, and the decisions that make the image feel intentional rather than averaged.

Even the strongest model output is only one ingredient.

That last word — "averaged" — is what both designers resist. Models generate from countless examples blended together, and what disappears in that blending is individuality: the spark a human brings. In marketing, that spark isn't optional. It's how work stays fresh.

Generative AI doesn't make compositing obsolete. It makes more compositing possible at the pace modern marketing demands, without leaving behind the human instincts that render the results unique.

Or, as Vu puts it, "The design eye is irreplaceable."