Topaz Plugins – Workflow Recommendations

When To Use DeNoise AI, Sharpen AI, and Gigapixel AI

One of the most common questions we receive here at Topaz Labs is when should you use each of our plugins? The truth is there isn't one "perfect way" to use our programs, but a thorough understanding of each program's purpose will help you make an educated decision for your own unique workflow.

Source: https://support.topazlabs.com/article/45-when-to-use-denoise-ai-sharpen-ai-and-gigapixel-ai

When To Use DeNoise AI

DeNoise AI is intended to be a dedicated noise reduction software. It allows you to reduce noise while retaining fine detail that would be lost in traditional noise reduction tools. **While it has some sharpening capabilities, these are not the same robust AI sharpening capabilities in Sharpen AI to address concerns such as motion blur and missed focus.** This is just a basic sharpening tool for when more complex sharpening is not needed, like what you would find in Lightroom or Photoshop.

As for when to use DeNoise AI, consider how noise is affected by your editing. Anytime you edit a photo, you alter the pixels in that photo. Your noise is found within those same pixels, and as you edit you are affecting both the image you photographed and the noise.

Most of the time, you can probably run DeNoise AI wherever you want in your workflow and it will work just fine, but in some cases, if you edit the noise too much, or if the noise is not recognized by the AI model, the noise reduction might fail. Remember, DeNoise AI's noise reduction models are trained on unedited noise.

When such a conflict is suspected or likely, you should run DeNoise AI early in the editing process before you've edited the noise itself.

Note: DeNoise AI's noise reduction models are trained on digital, color photographs. It has not been trained specifically for black and white images or to remove film grain in digital scans of film images. Many users report that it will work in such cases, but please know errant behavior is more likely to result in such cases.

When To Use Sharpen AI

Sharpen AI is intended to address several concerns including motion blur/camera shake, missed focus, and out-of-focus images.

It also has some minor noise reduction capabilities like what you would find in Lightroom or Photoshop, but **it should be noted that the noise reduction feature in Sharpen AI is not the same AI-based, detail-preserving noise reduction found in DeNoise AI**. It is simply in Sharpen AI as a minor workflow tool when more robust noise reduction is not needed.

As for when to use Sharpen AI, this depends on the photo itself.

Traditionally, you would do most of your sharpening toward the end of an edit, but if you're correcting missed focus or motion blur, you'll probably want to use Sharpen AI earlier in your editing process so that your subsequent edits don't interfere with the process.

For more generic sharpening to address "soft" images, you will probably want to do that toward the end like you might do in other workflows.

When to Use Gigapixel AI

Gigapixel AI is intended to be a photo enlargement program so that you can take small images and make them bigger without losing detail.

We've all seen what happens when you take a small digital image, such as a small jpg picture, and try to zoom in and make it larger. It becomes pixelated. Gigapixel helps you enlarge that image, preserve the detail, and avoid pixelation.

You can take any image and upscale it by 2X, 4X, even 6X its current size and preserve detail that might otherwise be lost enlarging such an image.

There are also some tools for noise reduction and blur removal, as well as color bleed reduction and face refinement built into Gigapixel as well. **Like our other apps, these are not necessarily as robust as our dedicated apps for noise reduction and sharpening but can help speed up your workflow when such additional image improvement is not necessary.**

It should also be noted that Gigapixel has a model for animation and computer graphics images as well.

As for when to use Gigapixel AI, it is often used as a final workflow step, but this can also depend on the original input image as well.

If you want to enlarge an image you are happy with, use it last. If you need to enlarge the image to edit it properly, it's ok to use it first.

Understanding Your Photo Editing Workflow To Get Better Image Quality

Author: Brian Matiash

Source: https://www.topazlabs.com/learn/understanding-your-photo-editing-workflow-to-get-better-image-quality

One of the most common questions both our Topaz Labs Customer Support agents and I receive involves photo editing workflow confusion. Specifically, users want guidance on using our apps and learning which order will provide optimal image quality improvements (for those who own several of them).

The good news is that if you're one of those users who can relate, you're not alone! People have asked me about photo editing workflows for years, and I'm excited to introduce you to a new series designed specifically to tackle these questions.

What is a photo editing workflow?

It's essential to understand what a photo editing workflow is before we dive into the tools we'll use. We know that we're talking about post-processing because of the word editing in the title. The other component is the order, or sequence, in which we use the tools at our disposal. We should also set some ground rules about this series because the tools and the order you use them have been the subject of debates for many years and will likely continue for eons.

First, this series isn't about elevating or bashing any particular applications. I happen to use Adobe Lightroom Classic to manage and edit my photos, so it's reasonable to expect that I'll be using it a lot in this video series. Please don't take that to indicate that other similar applications are inferior or that I am endorsing Lightroom. It's your responsibility to determine which applications best suit your needs and take what you learn in this series as instructional and not as dogma.

Second, this is the Topaz Labs Learning Center, so it's also reasonable to expect that I'll be using our applications to tackle common issues like excessive noise, lack of sharpness, and image upscaling. Other alternative applications perform similar functions, but this workflow series will focus on the Topaz Labs suite of AI-powered tools.

Finally, photo editing workflows can be very personal. It's not uncommon for photographers to spend years constantly refining the tools used to edit photos to meet their specific needs.

My workflows are not the gold standard just because I'm featuring them in this series. Also, the order in which I use our apps meet my needs, but they may not meet yours. That's why it's critical to compare workflows to determine what works best with your images.

In other words, it's your responsibility to determine what your needs are and whether the workflows you learn meet those needs. I also recommend reading this article from our Support Center to learn what Topaz Labs' official recommendations on workflow order is based on how we train our AI models.

We all want to use a photo editing workflow that gives us better image quality, and while this isn't a "one size fits all" scenario, I'm confident that you'll learn a lot from this series. So, let's have some fun.

Little Bird, Big Dreams (© Matt Kloskowski)

I want to thank my good friend and photo educator, Matt Kloskowski, for providing his photo for this article and video. Matt has spent a lot of time photographing exotic birds in Costa Rica and often must contend with a recurring series of issues during post-processing.

High ISO settings are usually required to get a fast enough shutter speed to freeze the birds in action, resulting in lots of noise. Also, despite his best efforts, some of Matt's images lack critical sharpness, especially when zooming in on the bird's eyes. Finally, heavy cropping is often needed even when using a long telephoto zoom lens. As such, upscaling the resolution of the cropped photo will be required, but not at the risk of losing image quality.

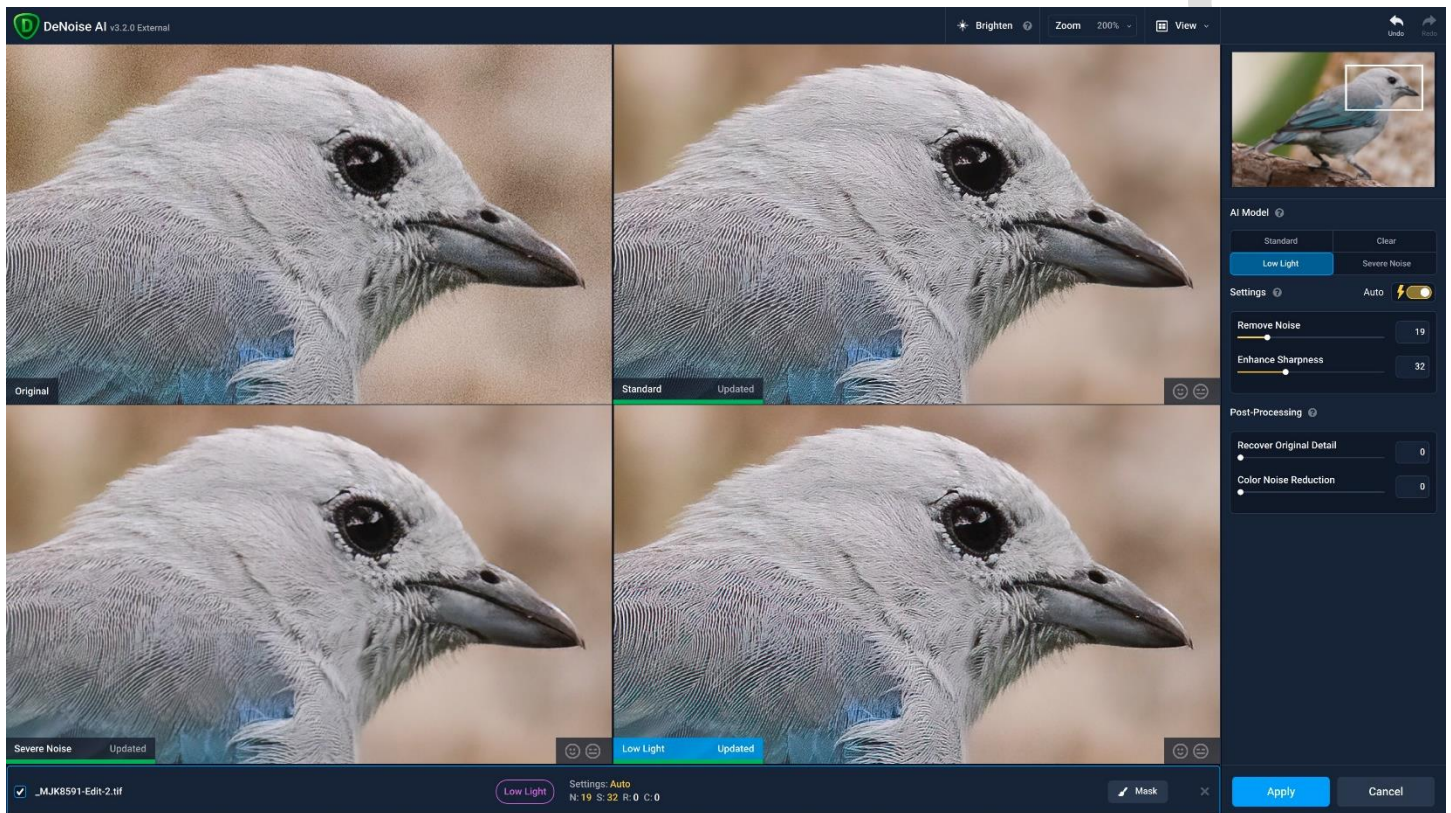### Step 1 - Correct tone, color, and composition using Adobe Lightroom Classic.

The one constant in my photo editing workflow is that I always correct the core elements of my exposure before doing anything else. This includes evenly exposing the highlights, mid-tones, and shadows using a combination of Lightroom's Basic panel tools and Tone Curve. Next, I turn to color correction, including setting the correct white balance, vibrance, and saturation values. Finally, I'll recompose the photo to suit my taste.

In this example, the bird looked very small in the composition when surrounded by the rest of the frame. The crop tool makes it very easy to isolate the bird and let it fill the frame. However, I've now taken a 42.2-megapixel photo and cropped it down to 2.9 megapixels, so I'll need to upscale.

As you can see in the image above, I used various Lightroom's Develop module tools to get the photo to a better starting point. The next step is to address the excessive noise that became even more prominent after cropping heavily. I'll use DeNoise AI to take care of that.

Step 2 - Use DeNoise AI to remove distracting noise while retaining edge detail.

While there are many noise reduction utilities, including the one in Lightroom's Develop module, they are not all equal in performance.

I prefer **DeNoise AI** for many reasons, but the two most notable ones are 1. the depth and variety of AI models based on different use cases and 2. the ability to preserve critical edge details while removing distracting noise intelligently.
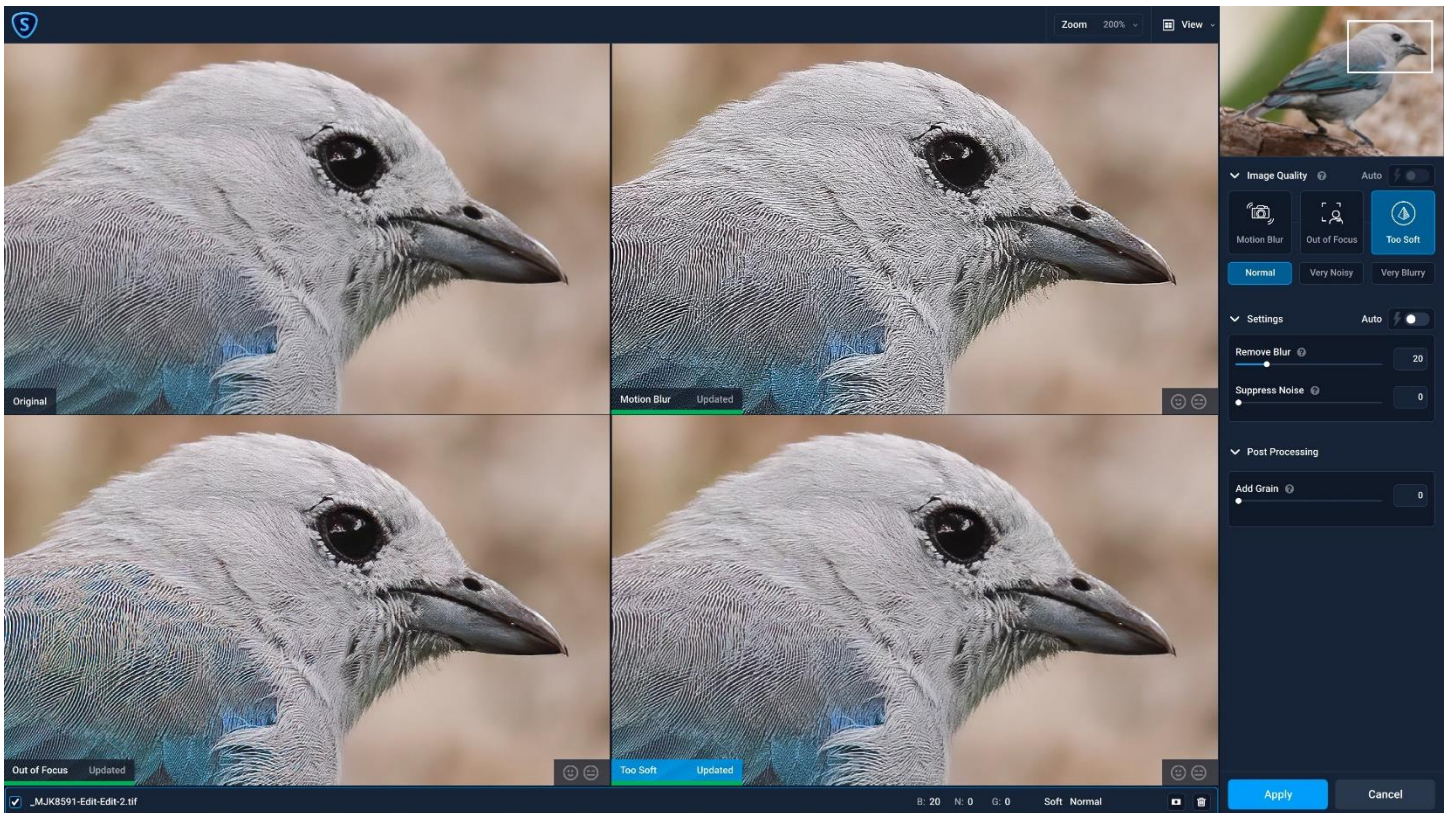
I explain the way I use DeNoise AI with this photo in the video below.

But to summarize, I always start in Comparison View to compare multiple AI models simultaneously and choose the one that works best for the given photo. I'll then fine-tune the model sliders and return to Lightroom upon completion.

Now that I removed the distracting noise from this photo, I want to add more sharpness, especially to the bird's eyes and feathers. So, I'll send the photo to **Sharpen AI** to accomplish that task.

Step 3 - Use Sharpen AI to add sharpness and edge detail.

I've found that I get improved image quality when I use Sharpen AI after DeNoise AI (in situations where I require both applications). While this photo certainly doesn't suffer from a lack of critical sharpness, it could benefit from a boost.
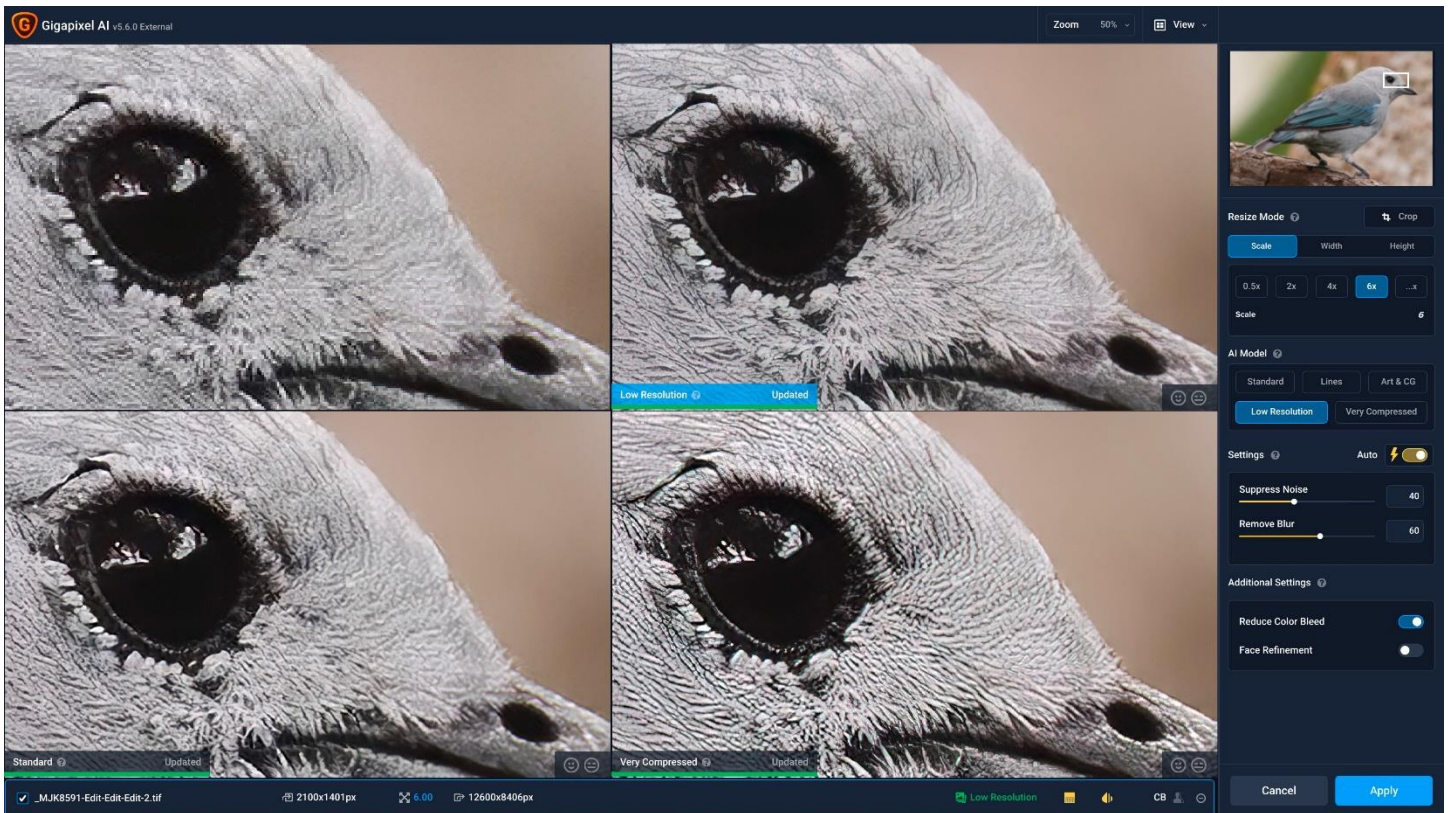
In my older photo editing workflows, I'd accomplish this task by using a combination of Lightroom's Clarity and Sharpening sliders. However, I've since turned to Sharpen AI after performing many side-by-side comparisons with my photos and finding the results to be consistently superior.

Much like my DeNoise AI workflow, I first use the Sharpen AI Comparison View to identify the optimal model and settings based on the details of the photo. When I'm satisfied with the results, I'll commit the changes and return to Lightroom.
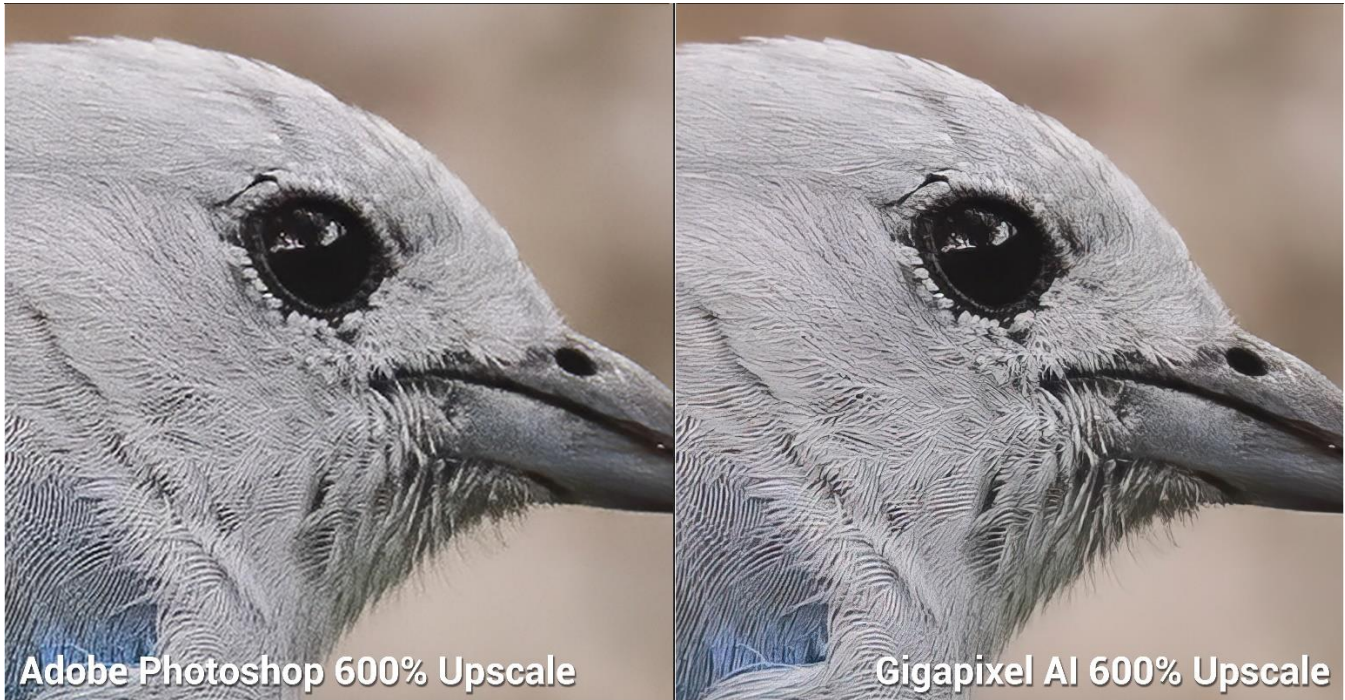
With the photo's tone and color corrected, noise removed, and edge details sharpened, my final step is to upscale it to a more suitable resolution. **Gigapixel AI** is the ideal utility to accomplish that task.

Step 4 - Use Gigapixel AI to upscale and increase resolution without losing quality.

As with noise reduction tools, not all upscaling methods are equal. In many cases, upscaling comes with image quality loss due to inferior algorithms. However, we've extensively trained Gigapixel AI to increase resolution while preserving—and enhancing—details.

We started with a 42.2-megapixel photo, cropped it to 2.9 megapixels, and will upscale it by 600%—totaling 105.9 megapixels—without losing image quality. I will compare the same upscale factor (600%) in the image below between Adobe Photoshop's Bicubic Smoother enlargement algorithm and Gigapixel AI. The improvements from Gigapixel AI are instantly noticeable.

Adobe Photoshop 600% Upscale | Gigapixel AI 600% Upscale

My photo editing workflow in action

Now that you better understand the photo editing workflow I used for this photo, you can watch it in action in this video (click to watch it on YouTube). I hope it inspires you to evaluate and refine your photo editing workflows, too.

Photo Editing Workflow 01 using Adobe Lightroom Classic, DeNoise AI, Sharpen AI, a...

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