Using Topaz Labs AI Applications

Hot Springs Village Camera Club

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Overview

- We will be working with three applications today, Sharpen, DeNoise, and Gigapixel.
- For the Sharpen app, the following features will be explored;
  - Motion blur sharpening
  - Soft focus sharpening
  - Selective area sharpening
- For the DeNoise app, we will explore
  - Low light images
  - High ISO images
- For the Gigapixel presentation, we will look at image resizing in general;
  - why, what size, how to methods
  - And how to use Gigapixel.
- The last topic will be a suggested workflow using these products.

Operational Notes

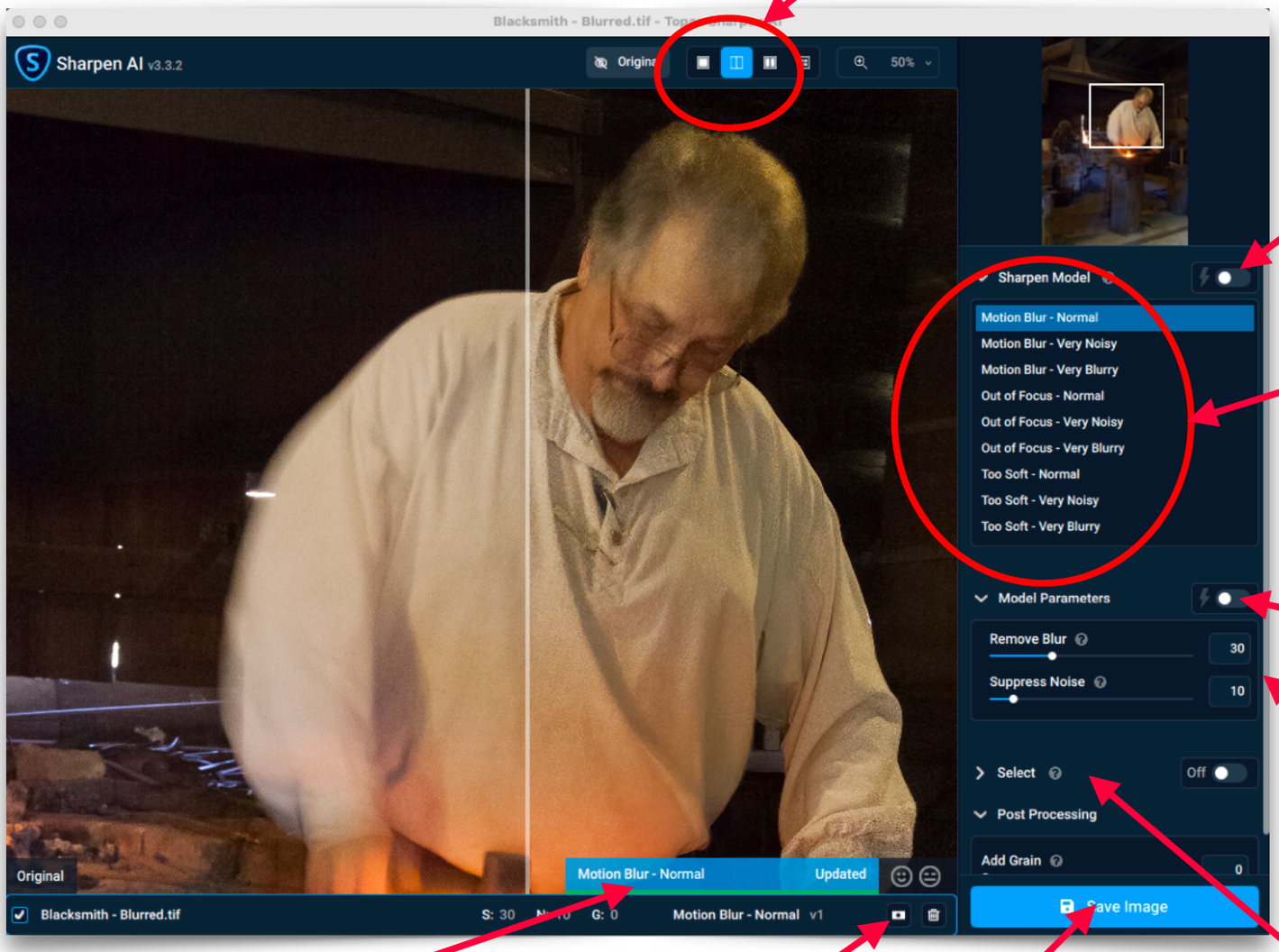
- Starting with your initial image format - whether that is RAW or JPEG, opening the image in any of the Topaz apps will create a copy in TIFF format.
- TIFF format has a much larger file size (4 times, or more) than the original file.
- If you open the file into the Topaz app, from Lightroom, the saved image will be located in the same file location as the original and will be part of the Lightroom Library file.

Getting Started

- I start my editing in Lightroom (LR), and I shoot RAW files almost exclusively. RAW files give you much more latitude for color adjustment and white balance than other file formats.
- Once I do the basics (detailed workflow will be covered at the end of the class), I take a good look around the image at 100% magnification.
    - Here I note areas of the image that are noisy, lack sharpness, have motion blur, etc. If noise is the only problem, I will use DeNoise. If lack of sharpness is the problem, with or without noise issues, I will use Sharpen. (It has some noise reduction capability).
- Gigapixel will be used for enlarging, for two main reasons;
    - I have cropped in very tightly on a small portion of the image, and want to be able to make a medium to large print.
    - I want to make a very large print, even with moderate, or no, cropping of the image.

Sharpen - Screen Details

Open Blacksmith Image



View mode selection

Auto Model selection

Manual Model selection

Auto Slider setting

Manual Sliders

Masking Settings

Progress Bar, Processing must complete to show effects

Click to activate masking

Click to apply effects and close image.

Sharpen - Motion Blur

- Blacksmith Image
- Select Auto mode - see what happens, explain dialogue at bottom of window
  - sharpen, noise, grain. Model chosen, masking icon
- Select Motion Blur - very blurry
- Set parameters.
  - Remove blur 62, suppress noise 49, grain 0
- Save
- Compare in Preview

Sharpen - soft Focus

- Anhingas kissing
- Load image in Sharpen
- Select Auto
- Set parameters
  - Too soft - very blurry,
  - remove blur 58
  - suppress noise 10
  - show effect of noise sliders, detail sliders
- Save
- Compare in Preview

Sharpen - Excellent focus and Masking

- Egret
- Load image in Sharpen
- Select sharpen routine
- Set parameters.
- Turn on Auto Masking
  - Use subject, or portait
  - Manually add/subtract mask area
- Save
- Compare in Preview

Sharpen - Selected Motion Blur

- Running horse Image
- Load image in Sharpen
- Auto select Subject
  - Refine
  - Invert to select all but the horses
  - Update
- Set parameters.
  - Motion blur normal
  - remove blur 60
  - suppress noise 10
- Save
- Compare in Preview

DeNoise

- Open noisy Cathedral image
- Shot at 5600 ISO
- select noise options - or auto.
- move sliders
- save and compare

DeNoise

- Open noisy Gulf Shores image
- Shot at 2400 ISO, 30 seconds
- select noise options - or auto.
- move sliders
- save and compare

Resizing Images

- How many Pixels do I need?
- For viewing on a monitor
  - Standard Wide Screen (also called 2K) = 1920 x 1080 (2.0 MP)
  - 4K, HD TV = twice the size of 2K = 3840 x 2160 (7.9 MP)
  - 8K, super HD, this resolution is on the market for home TV = twice the size of 4K = 7680 x 4320 (31.6 MP)
  - Mac Retina = 2880 x 1800 (4.9 MP), or 3072 x 1920 (5.6 MP).
- For making a print
  - snapshot, softer image, moderate quality - 150 dpi (dots per inch)
  - detailed image, high quality - 200 dpi
  - Gallery quality, very fine detail and shading - 250 dpi or greater.

Example Print Resolution Sizes

		Print size (inches)		Print size (inches)		Print size (inches)		Print size (inches)	
		6	10	12	18	20	24	24	30
	dpi	Number of pixels in each direction (width x height)							
	150	900	1500	1800	2700	3000	3600	3600	4500
MegaPixels		1.3		4.6		10.3		15.4	
	200	1200	2000	2400	3600	4000	4800	4800	6000
MegaPixels		2.3		8.2		18.3		27.5	
	250	1500	2500	3000	4500	5000	6000	6000	7500
MegaPixels		3.6		12.9		28.6		42.9	

Resizing Images

- Web posting
  - The highest resolution needed for general viewing is equal to the resolution of the monitor, with the image showing at full screen.
    - For most users, today, 2K, or 1920 x 1080 is sufficient.
  - If you want to show more detail, such as posting an item for sale on Ebay, and you want the viewer to be able to zoom in, then a larger file size is justified.
    - HOWEVER - websites may limit the maximum file size allowed. If possible determine what that value is and size accordingly.
    - If you Oversize an image, the website may automatically downsize it, and the image quality may suffer appreciably.
  - When posting on the web, the standard color space is sRGB. Convert your image to this space and view it before sending it out. Depending on the colors of your image, the conversion to sRGB may require re-editing to obtain approximately the same color balance.

Resizing Demo

- Open Yellowstone Image
- Image resolution is 2953 x 1354 pixels (4 Mp)
- Print size is limited to 15 x 7 for 200 dpi print
- Choose to Scale at 2X the pixel count
- Click through, Standard, Lines (architecture), Art & CG, Low Res, Very Compressed
- Choose Low Res
    - noise 30
    - blur 61
- save image
    - Image type, colorspace etc
- and compare
    - new size is 5906 x 2708 pixels (16 Mp)
    - Suitable for 30 x 14 print at 200 dpi.

Resizing Demo

- Open Galveston Image
- Image resolution is 1857 x 1913 pixels (3.5 Mp)
- Print size is limited to 12 x 13 for 150 dpi print
- Choose to Scale at 2X the pixel count
- Choose, Lines (architecture) and auto settings
- save image
  - Image type, colorspace etc
- and compare
  - new size is 3714 x 3826 pixels (14.2 Mp)
  - Suitable for 18 x 19 print at 200 dpi.

Suggested Workflow

- My workflow starts in LR and sometimes uses PS, and then the Topaz apps, as needed, then finish up in LR.
- You may be using other editing apps, and/or have a different workflow that you are comfortable with. In that case, determine the best point in your process to move the image to Topaz, make corrections, and return to your normal flow.
- The Topaz apps can be run as standalones, then the image can be edited in your usual manner.

Suggested Workflow

- I shoot RAW, and perform the following in RAW format. That provides the greatest latitude for color adjustment and detail enhancement in bright and dark areas.
    - In setting my preferences for both LR and PS, I choose ProPhoto RGB as the colorspace. This colorspace is larger than Adobe RGB, so it guarantees that any color information provided by the camera will be preserved in LR and PS.
- In LR my workflow runs something like this;
    - Turn on lens correction - reduces distortion and chromatic aberration (CA).
        - reducing CA is especially important for best results in sharpening and noise reduction.
- Adjust overall white balance
- Clean up spots, clone out detracting elements.
- Apply local editing via masks to areas as needed.
- Adjust local colors, dehaze, clarity, contrast, etc. (some of this might be deferred until after using Sharpen AI)
- Crop if needed.

Suggested Workflow

- At this point I may feel my basic editing is nearly done, but the image needs noise reduction or sharpening.
  - I then select the image in LR, and from the top menu bar select Photo/Edit In/ Topaz Adjust AI, or Topaz DeNoise AI.
  - I select Edit a Copy with LR Adjustments
    - TIFF
    - ProPhoto RGB
    - 16 bits
    - resolution (300 but it doesn't matter what you enter here)
    - Compression - None
- The image will now load in the selected app. NOTE: the image saved from these apps will be a TIFF format. Your original file in LR/PS will be preserved.
  - As a TIFF file, some of the color and detail data that was in the RAW file will no longer be available. That is why we want to optimize those items BEFORE going to the Topaz apps.
  - TIFF files are inherently very large. The same image in TIFF may be 5 times, or more, as large a file as the image in RAW. You will need adequate storage.

Suggested Workflow

- Once in the app, choose the best editing model and adjust the sliders as needed to obtain good results.
  - When satisfied with the modified image, click APPLY.
  - The image will be saved to the same location in your hard drive that the original came from, and you will be returned to the editing app you launched Topaz from.
- Back in LR, I will scan the edited image at 100% to look for any problem areas. If needed, will fix those. If large areas are affected, may decide to start over, loading the original image into Topaz, and then use the mask tools to limit the effects to certain areas.
- Final look around, perhaps re-crop, add a bit more dehaze or texture or clarity, to certain areas.
- I typically will add a vignette.
- Done

About the Apps

- The apps are available from topazlabs.com for a free, 30 day trial. Those apps will be fully functional, BUT a TOPAZ watermark will be overlaid on the image.
- I suggest downloading the trial and working with it to see what it can do for you.
- The apps use a lot of compute power. Testing the speed of response on your system with the trial will be worthwhile.
- The apps are sold separately
  - DeNoise - $80
  - Gigapixel - $100
  - Sharpen - $80
- Or sold as a bundle for $200
- The license includes one year of free updates. You can continue to use the purchased app indefinitely, even after the year ends. You just won't be eligible for updates.
- The apps may be loaded on as many computers as desired. Any two computers may share the license at any one time.
- After the first year, update licenses can be purchased for $100 per year for any two or more apps.

Time to try Your Files