



Panorama Fixes III

In this lesson I'll walk you through techniques to fix common issues encountered when stitching panoramas, particularly those involving warping or misalignment. By following these steps, you'll be able to correct perspective problems, blend images seamlessly, and straighten horizons in your panoramic photos using Adobe Photoshop.



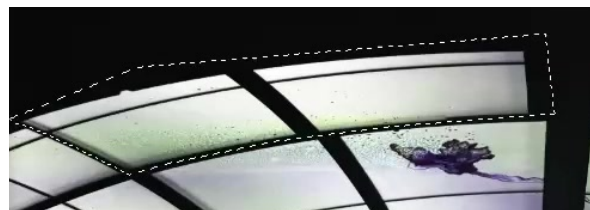
## Key Concepts

Here's a summary of the main steps we'll cover:

1. **Correcting Misalignment by Copying and Warping Sections:** This involves selecting misaligned portions of the panorama, copying them to new layers, and using Photoshop's Distort or Warp tools to align them properly. This is crucial for fixing localized errors in the stitching.
2. **Blending Images for Seamless Integration:** This technique focuses on blending a specific image area (like a person) into the panorama by deleting the corresponding area from the original panorama layer and using Auto Blend Layers to seamlessly integrate the new image. This ensures that important elements are included in the final panorama.
3. **Straightening Horizons Using Warp with Grid Control:** This method addresses issues with uneven horizons in panoramas, especially those taken with iPhones. By using the Warp tool with a customized grid, you can precisely adjust the horizon line and correct perspective distortions.

## Correcting Misalignment (00:40)

This technique is useful when you have small areas of your panorama that don't quite line up.



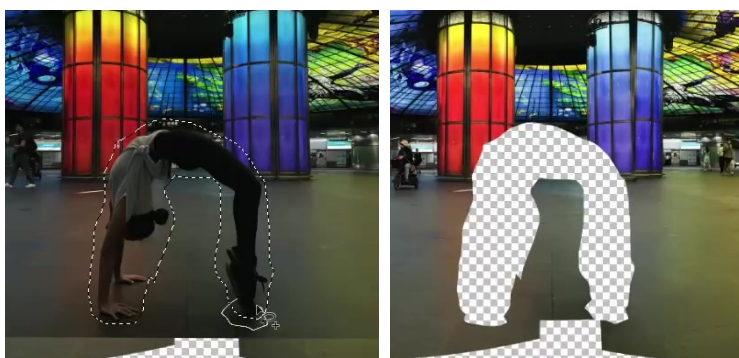
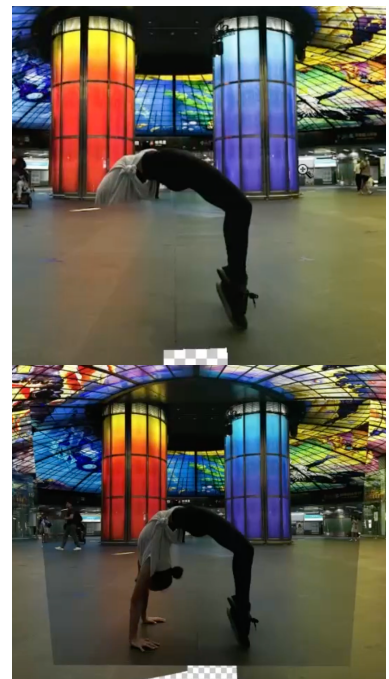
1. **Identify the Misalignment:** Zoom in on the area where you see a misalignment.
2. **Make a Selection:** Use the Lasso Tool to create a selection around the misaligned area. To create straight lines with the Lasso Tool, hold down the Option key (Alt on Windows), release the mouse button and then click to create a straight segment.
3. **Copy Merged:** Go to Edit > Copy Merged. This copies the selected area from all visible layers as if they were merged into one. This is important because your panorama might be made of multiple layers.
4. **Paste:** Go to Edit > Paste. The copied selection will be pasted into a new layer directly above the selected area.
5. **Create a Fill Layer:** Turn off the visibility of the pasted layer. Create a new, empty layer underneath the pasted layer.
6. **Fill the Gap:** On the new, empty layer, use the Clone Stamp Tool (or a brush with black paint if the area is black) to fill in the area that will be revealed if you move the copied section. To use the Clone Stamp Tool, Option-click (Alt-click) an area you want to copy, then click and drag over the area you want to fill.

7. **Transform the Copied Section:** Turn the visibility of the pasted layer back on. Go to Edit > Transform > Distort Or Edit > Transform > Warp.
8. **Distort (Alternative):** If you choose Distort, drag the corners of the selection to align it with the underlying image. Press Enter to apply the transformation.
9. **Warp (Alternative):** If you choose Warp, you'll see a grid. Drag the corners or points within the grid to bend and align the image. This allows for more organic-looking adjustments. Press Enter to apply the transformation.
10. **Clean Up:** If necessary, use the Clone Stamp Tool on the fill layer to refine the edges where the transformed section meets the original image.

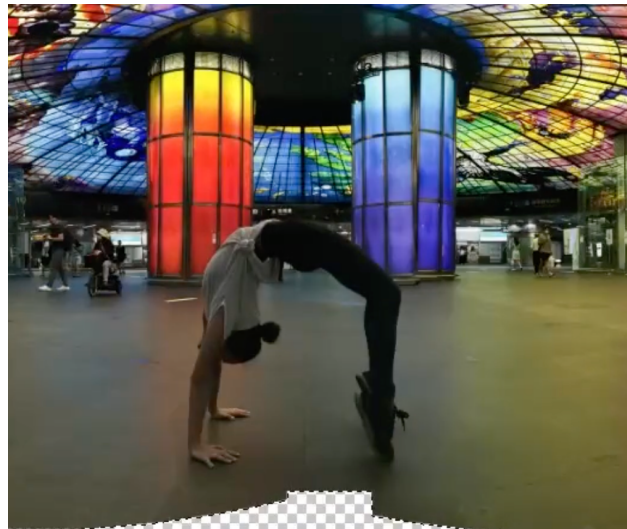
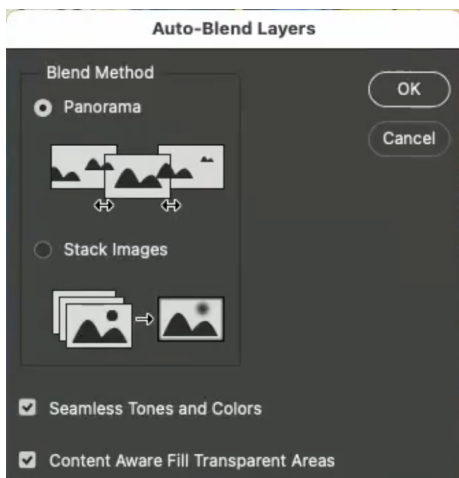
## Blending Images for Seamless Integration

This technique is useful when there is an object in one of the images that you plan to stitch that moved before the other shots where taken and ends up disappearing when the panorama is stitched. Here's how I get that object back into the panorama.

1. **Open Images in Photoshop:** Open both the stitched panorama and the source image containing the element you want to insert (e.g., your wife) in Photoshop.
2. **Move the Element:** Use the Move Tool to drag the element from its source image to the panorama image. Click and drag from the source image, hover over the panorama's tab at the top of the screen until it becomes active, then drag into the panorama's canvas before releasing the mouse button.
3. **Align the Element:** Select both the panorama layer and the layer containing the element. Go to Edit > Auto-Align Layers. Leave the default settings and click OK. This will attempt to automatically align the element with the panorama.
4. **Create a Selection:** Use the Lasso Tool to create a selection around the element you want to keep.
5. **Delete from Panorama:** Turn off the visibility of the element's layer. Select the panorama layer and press Delete to remove the selected area from the panorama. This creates a hole where the element will be inserted.



6. **Blend Layers:** Select both the panorama layer and the element's layer. Go to **Edit > Auto Blend Layers**. Leave the default settings (usually Panorama) and click OK. This will seamlessly blend the element into the panorama.



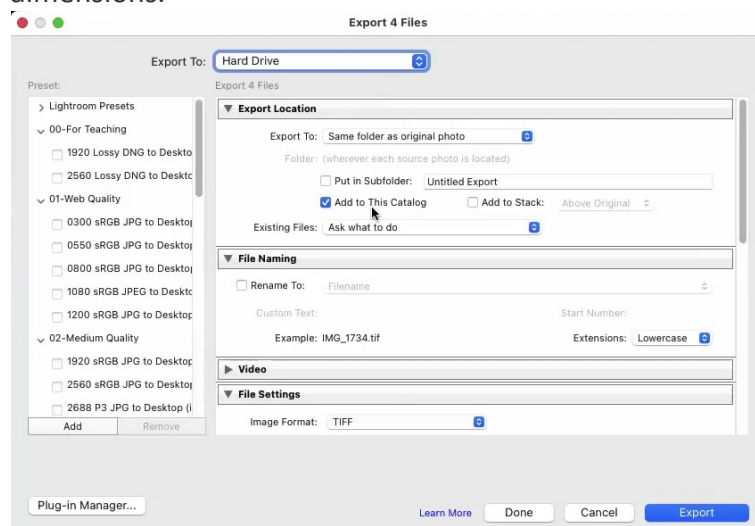
## Vertical Panorama Fixes (15:28)

Now let's look at a multi-shot iPhone panorama that needed a good amount of work.

### Exporting as TIFF from Lightroom

If Lightroom's panorama merge struggles with iPhone RAW files, exporting as TIFF can help.

1. **Select Images:** Select the original RAW images in Lightroom.
2. **Export:** Choose **File > Export**.
3. **Export Settings:** Configure the export settings as follows:
  - **Export Location:** Specify the same folder as the original images.
  - **Add to Catalog:** Ensure "Add to This Catalog" is enabled.
  - **File Format:** Set the file format to "TIFF".
  - **Image Sizing:** Disable any resizing options to maintain the original image dimensions.



4. **Re-merge in Lightroom:** Select the newly created TIFF files and attempt the panorama merge again (Photo > Photo Merge > Panorama).

### Editing in Photoshop

If Lightroom still fails or produces unwanted distortions, switch to Photoshop for more precise control.

1. **Select Images:** In Lightroom, select the images you want to include in the panorama.
2. **Edit in Photoshop:** Go to Photo > Edit In > Edit in Adobe Photoshop. This will open the selected images as layers in Photoshop.

### Setting Up Guides in Photoshop

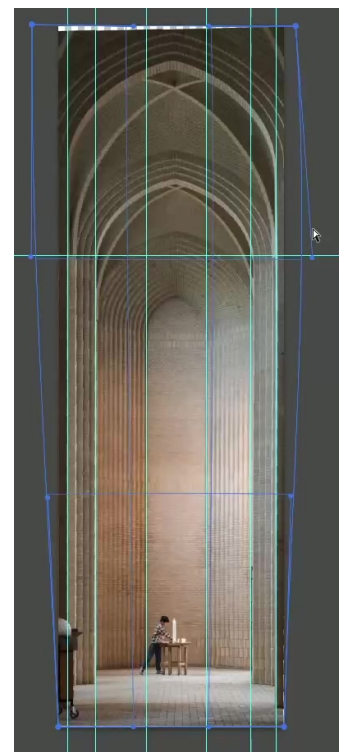
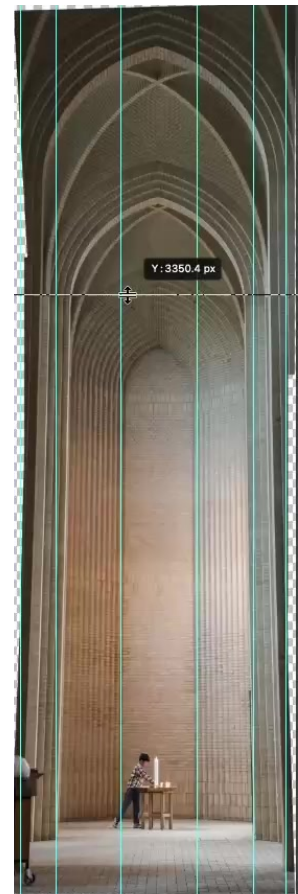
I find it helpful to place guides at the edges of columns, walls, or other architectural elements.

1. **Show Rulers:** Press Cmd+R (Mac) or Ctrl+R (Windows) to display the rulers.
2. **Create Guides:** Click and drag from the left ruler to create vertical guides. Position these guides along prominent vertical lines or edges in your image that you expect to be straight. Repeat from the top ruler for horizontal guides if needed.

### Correcting Distortion with Warping

The Warp tool allows you to manipulate the image's geometry.

1. **Convert to Smart Object:** In the Layers panel, right-click on the image layer and choose "Convert to Smart Object." This allows for non-destructive editing.
2. **Access Warp Tool:** Go to Edit > Transform > Warp. This activates the Warp tool, overlaying a grid on your image.
3. **Corner Adjustments:** Click and drag the corner points of the warp grid to adjust the overall perspective. Focus on aligning the vertical lines with your guides.
4. **Handle Adjustments:** Each corner point has a handle extending from it. Drag these handles to control the curvature and angle of the warp.
5. **Fine-Tune:** Click and drag within the warp grid to make localized adjustments. You may need to experiment to achieve the desired result. If the image feels lopsided, try pulling the upper corners straight up or down.
6. **Apply Warp:** Press Enter or Return to apply the warp transformation. Since you're working with a smart object, you can always double-click the smart object layer to re-enter the Warp tool and make further adjustments.





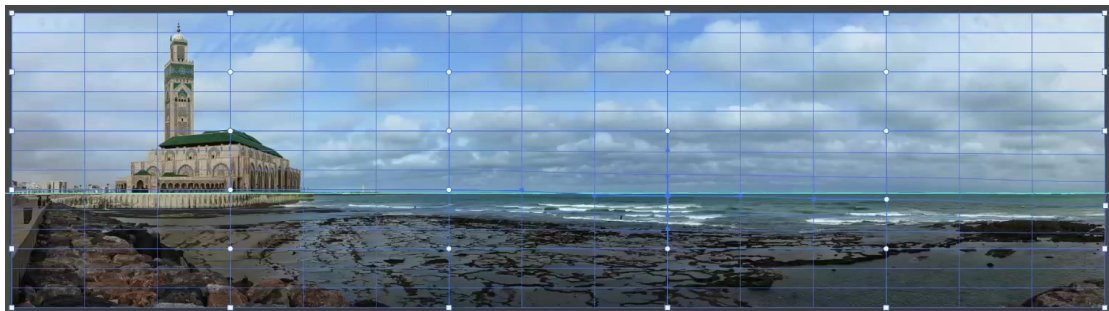
## Straightening Horizons Using Warp with Grid Control (26:49)

This technique is particularly useful for panoramas taken with a phone, where the horizon might be uneven.

1. **Show Rulers:** Press Command-R (Ctrl+R on Windows) to show the rulers.
2. **Add a Guide:** Click and drag from the top ruler to create a horizontal guide where you want the horizon to be. This will serve as a visual reference.



3. **Convert to Smart Object:** Convert the panorama layer into a Smart Object by right-clicking on the layer and choosing "Convert to Smart Object". This allows for non-destructive warping.
4. **Apply Warp:** Go to Edit > Transform > Warp.
5. **Adjust Grid:** In the options bar at the top, find the "Grid" dropdown menu and select a grid size like 5x5. A higher grid size gives you more control points.



6. **Adjust Horizon:** Drag the points along the grid lines near the horizon to align the image with the guide. Focus on the areas where the horizon deviates from the guide.
7. **Fine-Tune Curvature:** Click on the white points to reveal handles. Adjust these handles to fine-tune the curvature of the horizon.
8. **Apply and Refine:** Press Enter to apply the warp. If needed, you can double-click the "Warp" filter under the Smart Object layer to re-enter the Warp tool and make further adjustments.

By following these steps, you can effectively address common panorama stitching issues and achieve seamless, visually appealing panoramic images.