

Assignment #7: Using Gimp/ Photo Editing

Due on April 14, 2023.

Submit a single PowerPoint document to my inbox, that includes all of the following objects:

- PowerPoint slide #1:** The image of the bridge seen on the next page can be converted into a raster image by examining the .pdf version of this assignment on the course homepage, taking a screen shot or other screen clip, and then pasting the result into GIMP. Then:
 - The detail structure in some of the roof pieces is too fine. Color those beams in (e.g., with black) so that they look like solid pieces.
 - Add an alpha channel to your image. Then in small chunks, lasso-select all of the pixels that aren't part of the bridge and delete them to make the background transparent.
 - Create a second, much larger image in GIMP ("File/New"). Make sure it has an alpha channel, then paste your bridge image into it. You'll probably see a variety of glitches caused by imperfect lasso-selecting. Try to fix them with a paintbrush or more deleting, and also do your best to sketch in the missing lower-right corner of the bridge.
 - Paste the final result into a PowerPoint slide. Don't close the image in GIMP yet. In PowerPoint, add your own blue sky background, some clouds, and some ground on each side of the bridge. Show a ravine or something below the bridge.
 - Back in GIMP, make *another* copy of the bridge. Then on this copy, erase the back layer of the truss (i.e., delete those parts) so that only the front parts of the truss are still there. Then paste this as another new image into your PowerPoint. Use the arrow keys to align this last image perfectly over top of the previous image. The arrow keys have more refinement when you are zoomed in more!
 - Similarly edit the photo of the postal truck. Add an alpha channel, remove the background clutter, flip it horizontally, rotate it a little, try the perspective tool to match it a little better to the perspective of the bridge, and finally crop it to a reasonable region. Then copy it into your PowerPoint slide, rescale it there again.
 - Find the "front" image of the bridge, and bring it to the front. Then animate the truck so that it appears to drive across the bridge, driving from right to left, passing behind the front layer of the truss but in front of the back layer.
- PowerPoint slide #2:** Without bothering Dr. McLean, find some of the equipment that would be needed to perform any Sophomore-level lab (i.e., in ISC 226). Take at least 3 pictures of the necessary equipment as if you were going to create an online manual for how to do the experiment. You do not have to actually create the web page or write any text portion. Before taking the picture, consider viewpoint, orientation, perspective, magnification, lighting and background clutter. Return all equipment carefully to the exact place and orientation in which you found it. Then, edit the images in GIMP for cropping, brightness, and final clutter removal. Past them into PowerPoint, and then add at least 6 total "annotations" in PowerPoint: (e.g., text labels, arrows, scale indicators etc.).
- PowerPoint slide #3:** Review the images on my Optics Lab web site:
<https://www.geneseo.edu/~pogo/OpticsLab/OpticsSchedule.htm>

Pick any photograph of your choice, and find three points of critique for that *one image*. Maybe an image is too dark, or requires a label, or has too much clutter, or is insufficiently cropped, etc. Then, use GIMP to make these changes. Then copy both the original and the revised copy the image into a single PowerPoint slide. Add a single text box that does not overlap with either image which explains your three critiques. Give the slide a title related to the corresponding experiment and the image itself.

Both of these images are from Wikipedia commons.

