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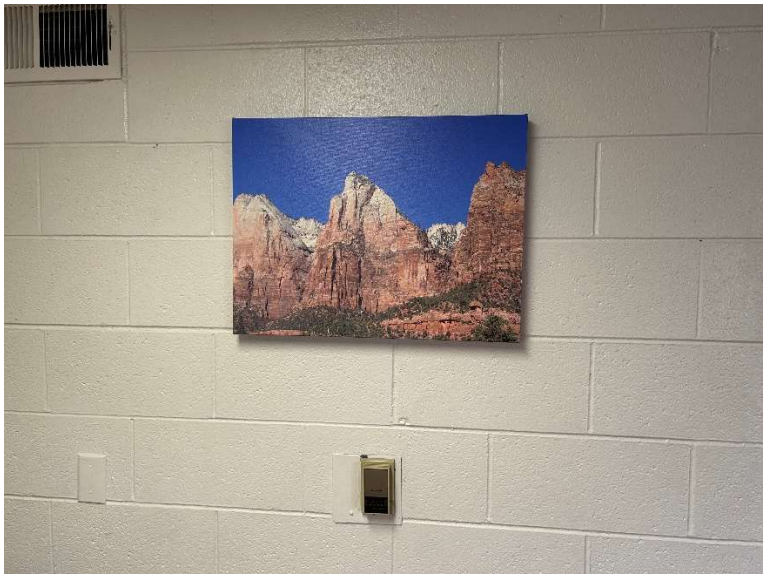
ECEN 631

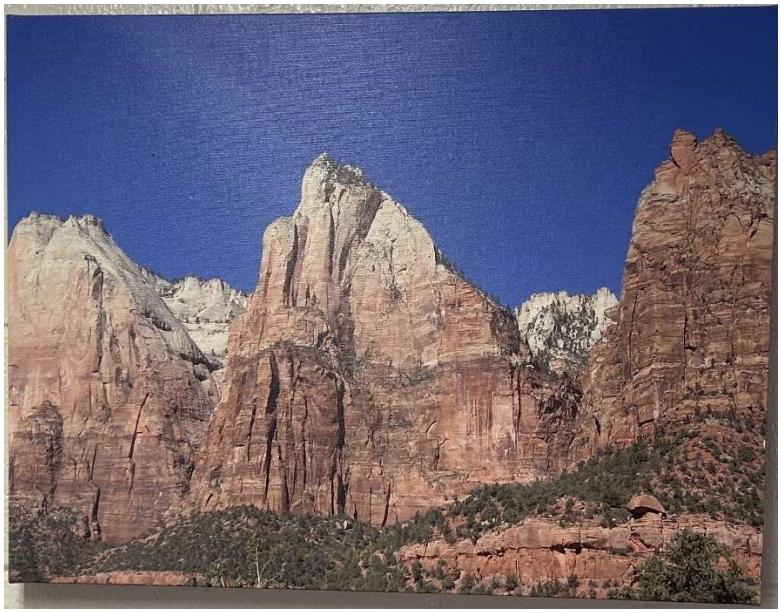
11 March 2025

Task 1

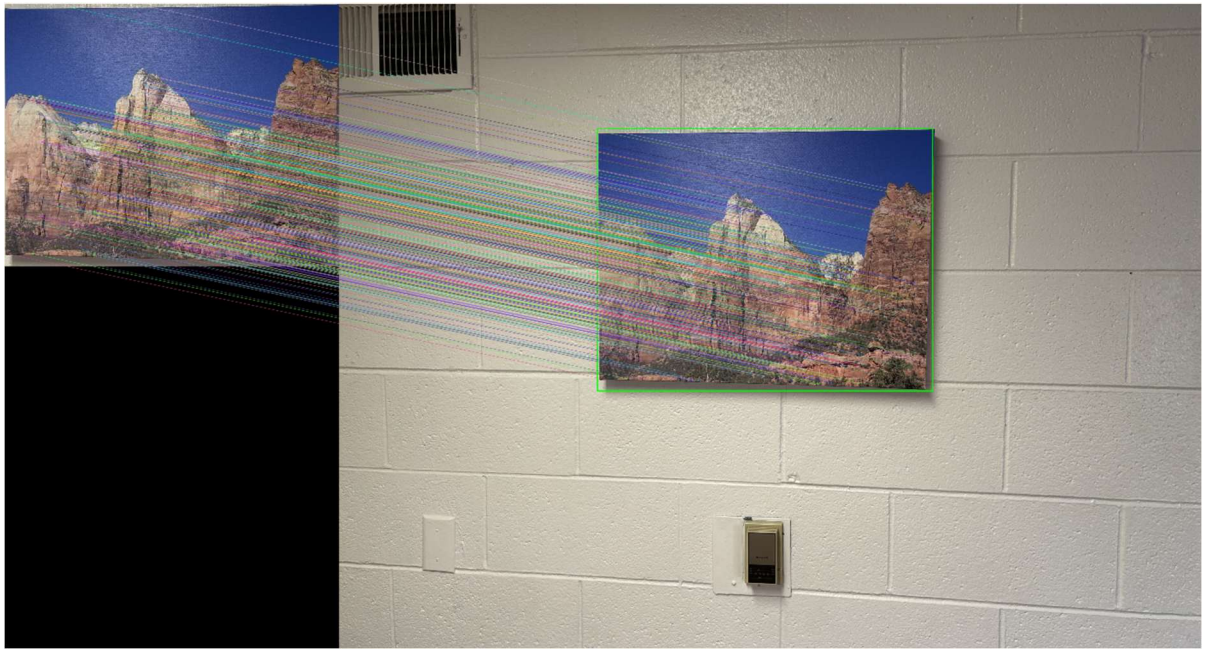
Original Image:



Cropped Image



Feature Matched



Task 2

For this task, I used the same reference image as before, and added a target image of Nacho Libre. First, I attempted to make the transformation work in real time. I had to use sift, as the class suggested in the lab specs was pattened. This was slower than desired. But it worked well. I used it to find features on both images, match them, and get a contour around the features in the frame from the video. I removed the matched features where the distance was too large and then transformed the image onto the video.

Originally, the output was quite noisy. This is probably because of my inconsistent movement in the video. This caused the frames to be quite blurry. So, I stored all the results in a video, marking which frames made dramatic jumps. Then, I used post-processing to remove them and replace it with an interpolation between the frames that were transformed correctly. This prevented the model from working real time, but greatly improved accuracy. A Youtube video of my results is shown below:

https://youtu.be/XozFLtEIbUc