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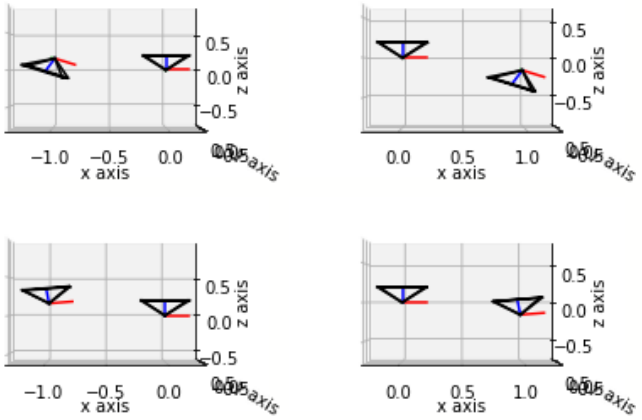
HW5 Write up

For the first step, I use SIFT to find the matched points between two images and the result is like this:

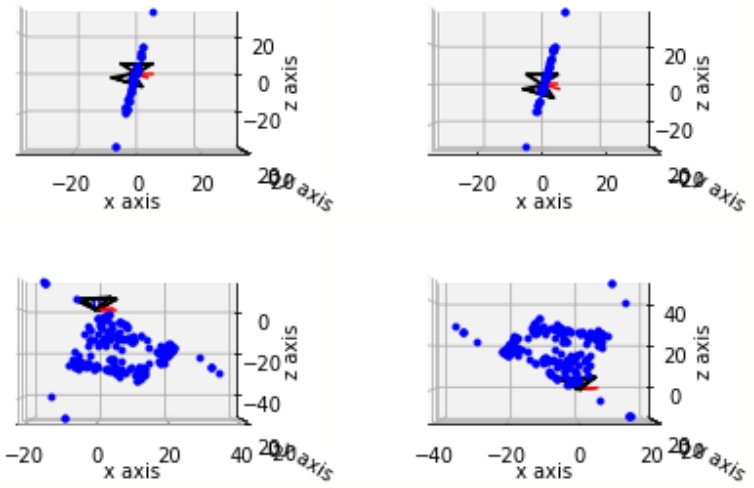
We can see the points are matched by blue lines across the images.
Second, compute the fundamental matrix and draw epipolar lines, get a figure like this:

Third, compute the camera poses and visualize it:



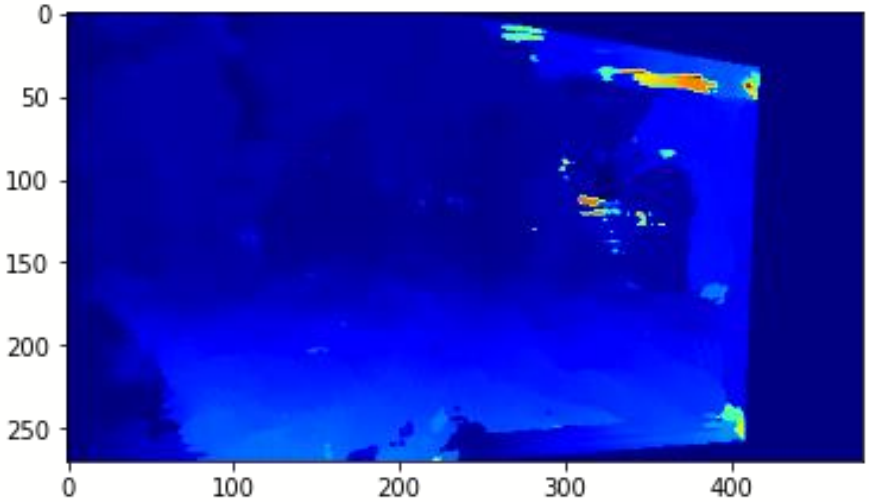
We can see the four configurations of camera pose from my fundamental matrix.

Fourth, using provided function to visualize 4 sets of camera poses with reconstructed 3D point cloud:



Fifth, after implementing dense stereo matching between two views based on dense SIFT, I get this:

It's the rectified image pair.
Finally, I visualize the stereo match, and this is the disparity map:



We can see the red areas are differences between two images and dark blue area are similar. For details, please see my code. Thank you!