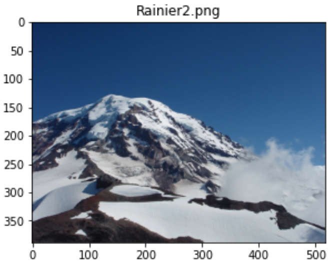
Ijaz Mohamed Umar

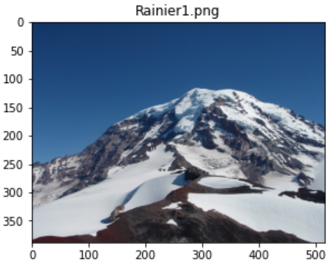
Note: While running the code please be patient as it'll take a couple of minutes to show results as my implementation has a lot of loops.

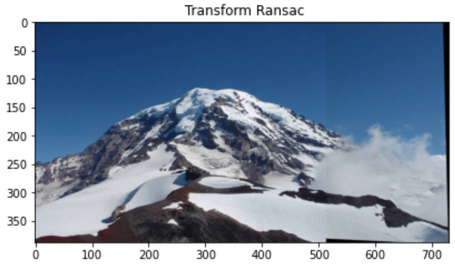
HOW TO RUN

The way I coded my warp function the second input image is the fixed one so when inputting the filename in the first few lines of code you need to make sure you give the right file name in the right order.

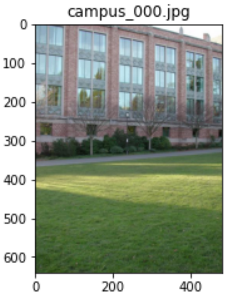
For example, the Rainier Mountain images, it should be file1_path="Rainier2.png", and file2_path="Rainier1.png". Which will show the following result:

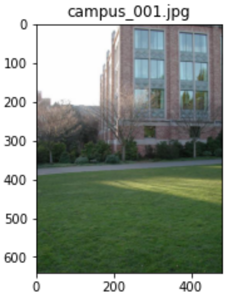

Rainier2.png

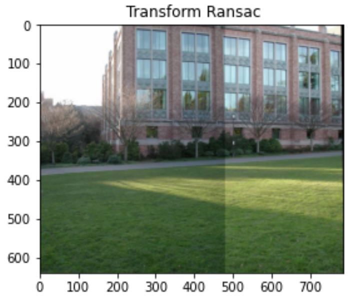

Rainier1.png


Transform Ransac

Another example is the campus_000 and campus_001 images from the zip file. It should be file1_path = 'campus_000.jpg' and file2_path = 'campus_001.jpg', which results in:


campus_000.jpg


campus_001.jpg

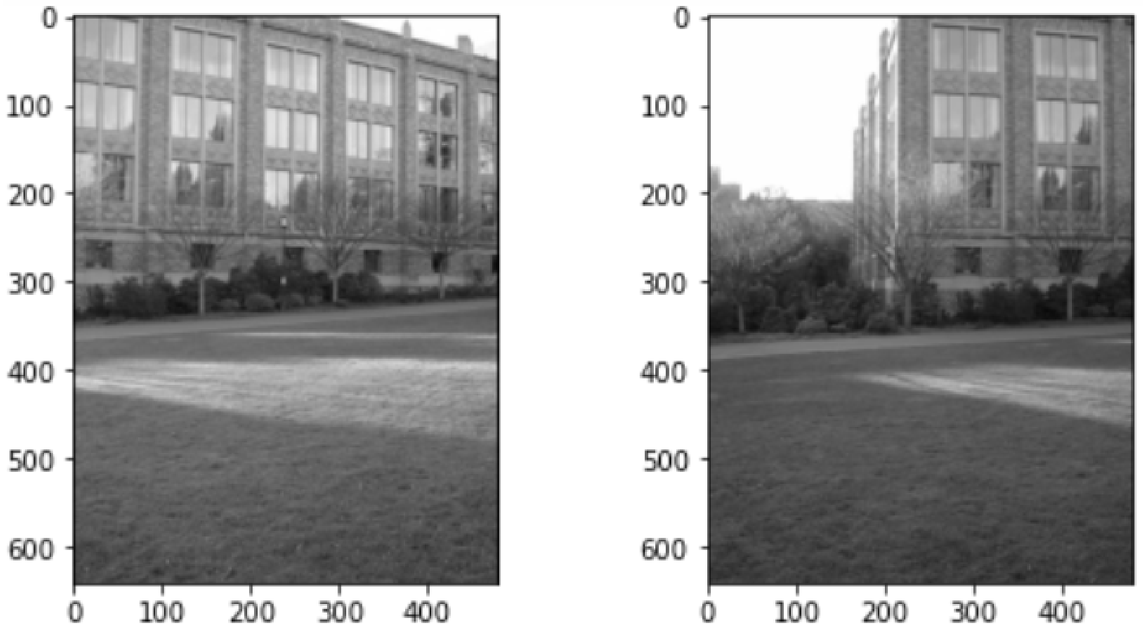

Transform Ransac

TESTING

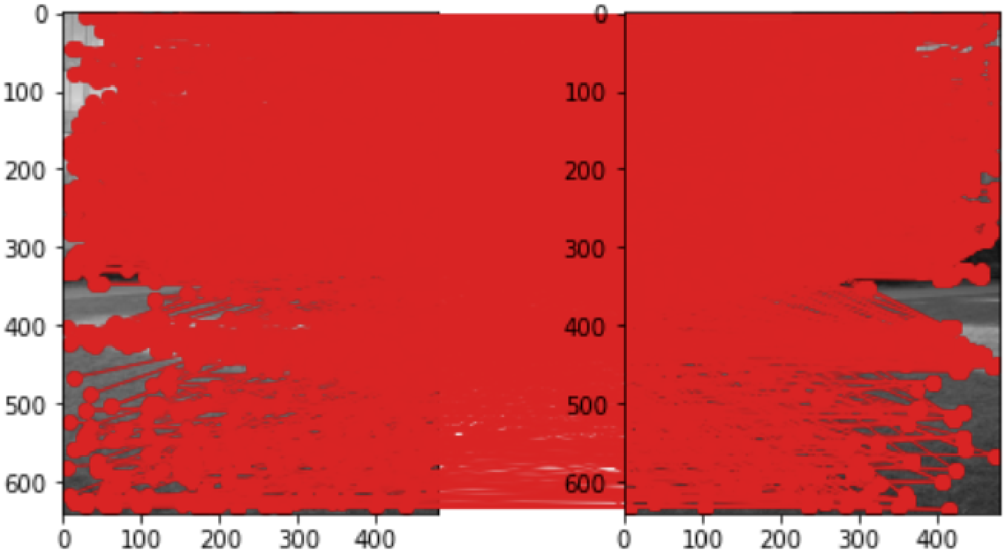
For testing I used the campus images. I converted some of them to gray to show the matches better in this document.

Campus Image

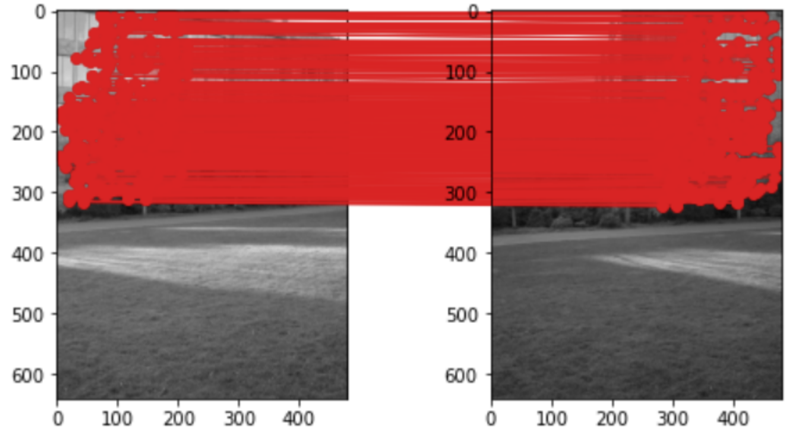
The starting image is this:



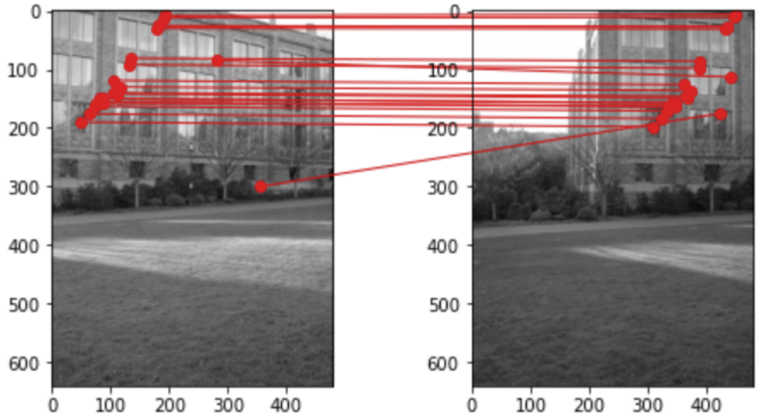
After the keypoint matching:

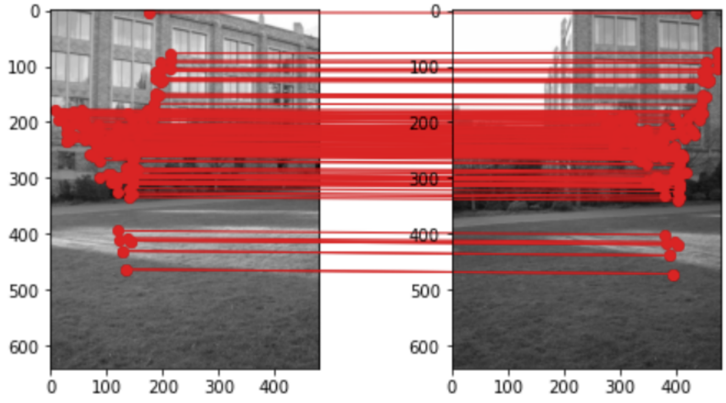


As you can see there were alot of outliers, so after running ransac, it cleaned up the points:



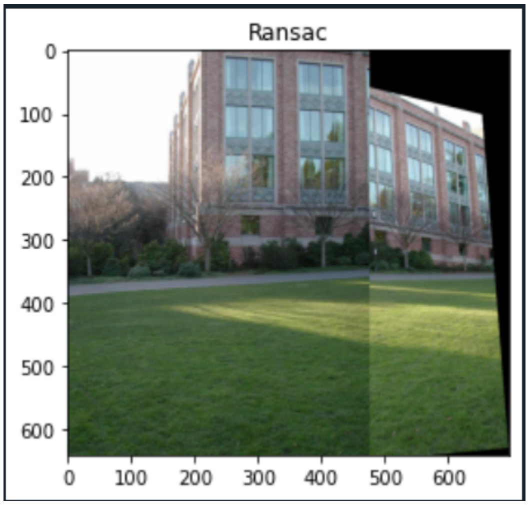
Now, you may need to rerun the program a couple of times since ransac doesn't always clean it up properly due to the selection of keypoints. For example these are some of the different results:



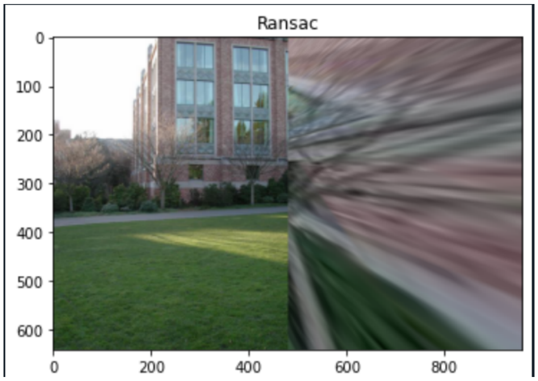


IMPORTANT: I had to run the program a couple of times to get the right result. Sometimes the right result comes straight away but sometimes it takes 4-5 times of rerunning the program to get the right result. This is because of the random points that ransac is choosing, so great patience is required to see the right results due to the program being slow. I showed a couple of the tries here to show the end stitched result.

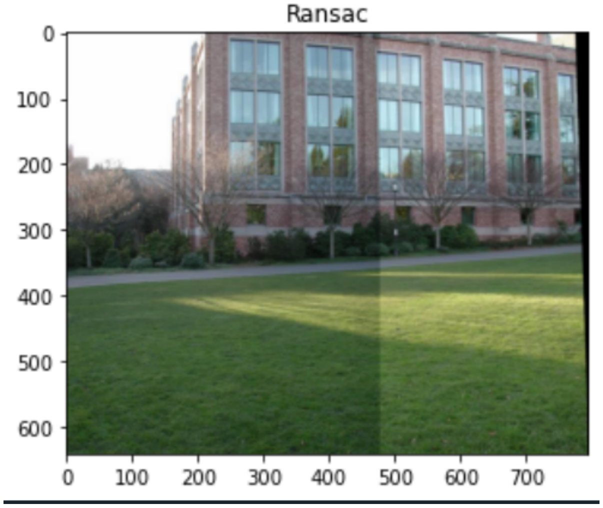
First Try: (Avg Result)



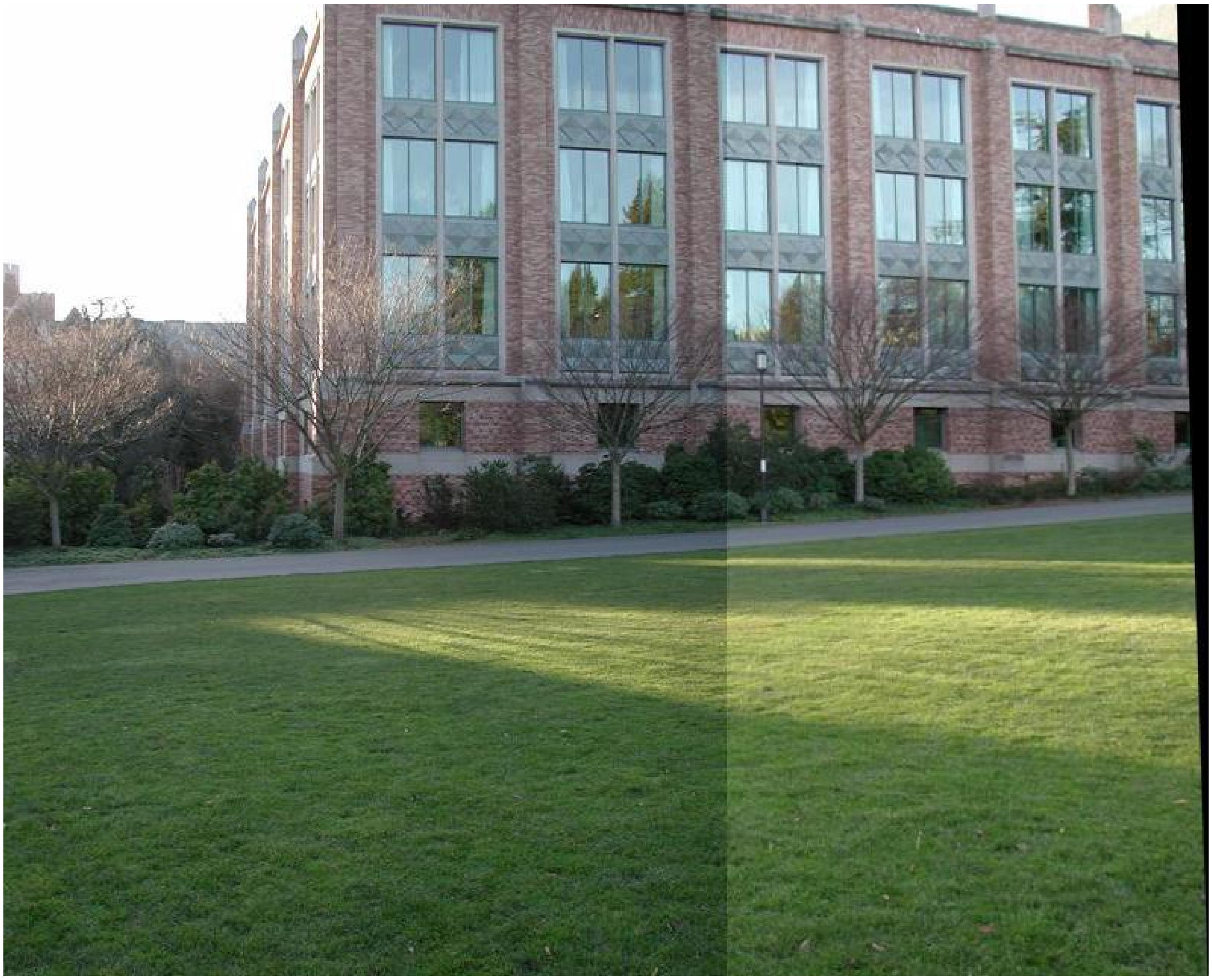
Second Try (bad result):



Third Try (Best Result):



So finally after running it several times I got the right output which I'll show again here as a larger picture.



Conclusion

Based on my results, it can be concluded that the ransac function of mine won't produce the same results due to the random points it selects when running. The program may output the right result the first time it runs or it may take several reruns to produce the right result.