

# **Comp Photography**

## **Assignment #8**

### **Panoramas**

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# Input Panorama images



Input image-1

- I choose to make a panorama picture of the library near my house.
- I took 3 pictures in front of library, and run my code, the results come out very good as I hoped for.
- Also, using provided test images and the result come out is very good too.

## Input Panorama images (image 2&3)



Input image-2



Input image-3

## Output Panorama image



The result of my code for panorama output



## Output Panorama image



- I took the result output and I cropped my output image manually using GIMP v2.8 to have better image.

## Panorama Test Image Output



The result of my code for panorama test output

## Panorama Test Output



- Use the Panorama test output, i cropped image manually using GIMP v2.8 to have better look of the test output

## Discuss and Answer Questions

- **blendImagePair:** To implement this function. First, I create a proper image size and simply superimpose the image using the mask information. And create weighted mask then get the weighted images. Then superimpose two weighted images.
- The Panorama I attempted to make was a Planar panorama, by moving horizontally, with no rotations. My test image come out very good and it's good learning experience about panoramas and how image are matched.
- When I decreased the number of matched feature, my output image got very blur and not see clear. But the provided output test images doesn't see much different. In this assignment, the condition of threshold is 5 (ransacReprojThreshold=5.0). So, when decreased  $< 5$ , then it will get errors message! Simply show a message saying not enough matches are present.
- Increasing the number of matched feature, the image looks better. When enough matches are found, it extract the locations of matched keypoints in both the images. So, increasing too much, it just doesn't impact or do anything.
- In my test image, I use 20 as number of matched feature. If I increase  $> 20$ , the image doesn't change. But if I decrease the number matched below  $< 9$ , than image output is very blurry.
- I happy with the result, the panorama image come out fine as I hoped. The results looked great.