HW2—Q2

Note:

 10 points (2 points for algorithm description, 2 points for code implementation, 6points for performance of image processing). The preliminary results are just for reference. You are encouraged to find your own pictures. Your program needs to be able to run directly, if you need to use other variables, please save it in advance. Please submit your homework to spring2020cs270@163.com. With both subject and file name in this format. (CS270+ID+name+hw2) example, CS270_2019123321_张三_hw2.

Image registration was achieved in last assignment, following in the footsteps of the last assignment, you will implement image blending technique based on the Pyramid-Based Blending algorithm to be discussed in class. Pyramid-based image blending was introduced by Burt & Adelson in 1983 as an effective way to create seamless mosaics. Pyramid image blending works by blending the Laplacian pyramids of two input photos.

Task:

q1, Describe your Pyramid-Based Blending algorithm in detail using natural language or flowcharts(2 scores)

q2, Implement image registration or use build-in function, show your result like figure1. Just show the image registration result, it is not necessary to be the same as the reference picture (2 scores).

q3, Implement image blending based on the Pyramid-Based Blending algorithm(2 scores), and show your result like figure2 (3 scores)and figure3 (1 scores). Your results should not be worse than the reference results(my result without transition region). If you feel the task is too simple to show your true strength, you are encouraged to find your favorite pictures and achieve better results with any method. (bonus : 5 scores)

Reference result:

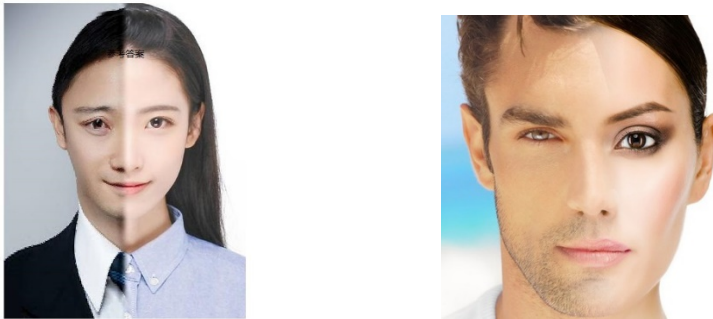Figure 1 image registration(2 scores)

Figure 2 pyramind blending (3 scores), The picture on the right is the ideal effect

Figure 3 hard blending(1 scores)). (this part is really simple!)

Figure 4 extra bonus (5 scores).