Homework2 report

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1、collecting mouse click

points.m is the script to choose corresponding points between two images and store the coordinates in a mat file.

2、computing homography matrix H

computeH.m: This function takes a set of corresponding image points t1, t2 (both t1 and t2 are 2xN matrices) and computes the associated 3 x 3 homography matrix H.

3、image warping

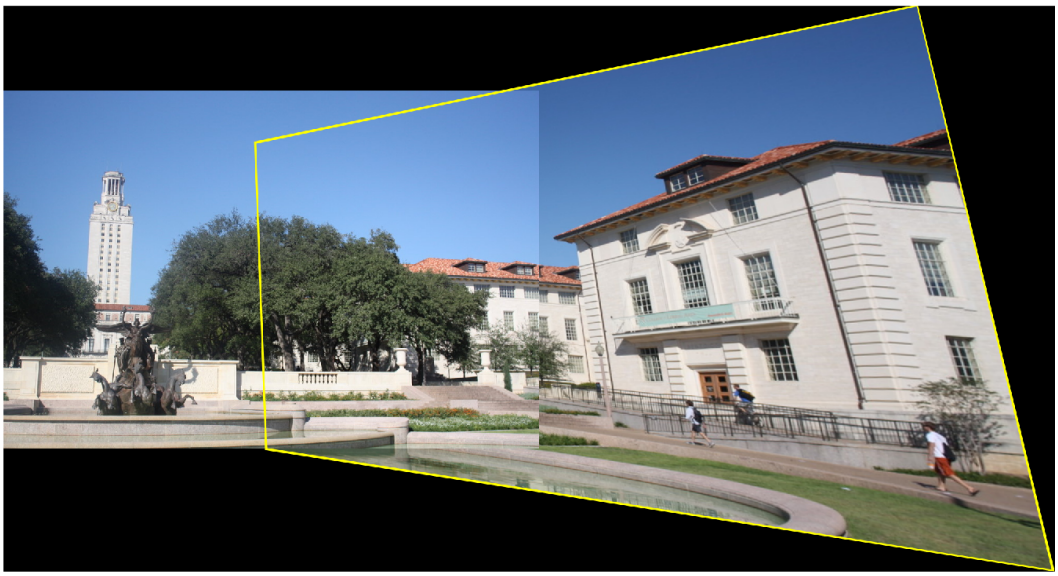
warpImage.m: This function takes as input an image inputIm, a reference image refIm, and a 3x3 homography matrix H, and returns 2 images as outputs. The first image is warpIm, which is the input image inputIm warped according to H to be in the frame of the reference image refIm. The second output image is mergeIm, a single mosaic image with a larger field of view containing both the input images. To avoid holes, an inverse warp is used.

All Matlab codes and test image are provided in the attachment.

4、Create the output mosaic

We apply our system in the provided image uttower1\2 to get the output mosaic

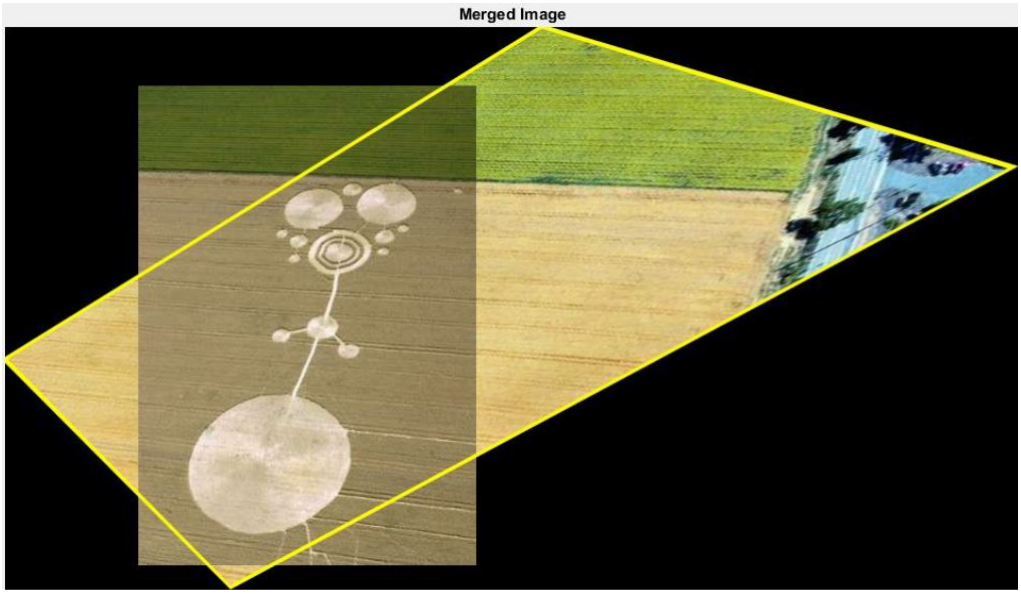
5、display the output mosaic of provided image



6、another example

consider the crop scene picture

applying our system to get the mosaic



7、Warp one image into a “frame” region

We insert a teaching Powerpoints slide into a billboard