

LAB-3

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1. Image mosaicing is the alignment and stitching of a collection of images having overlapping regions into a single image. In this assignment, you have been given three images which were captured by panning the scene left to right. These images (img1.png, img2.png and img3.png) capture overlapping regions of the same scene from different viewpoints. The task is to determine the geometric transformations (homographies) between these images and stitch them into a single image.

Inputs

Img1:



Img2:



Img3:



Output



2. Use your mobile phone camera to capture images (three or more), and run your code to generate the mosaic. Ensure that there is adequate overlap between successive images, and the camera is imaging a far-away scene (think why). Bring down the resolution of the input images such that the width < 1000 pixels, and convert them to grayscale before using them for mosaicing. (In MATLAB, use ``imresize'` to reduce the image resolution, and ``rgb2gray'` for conversion to grayscale)

Input

Img1:



Img2:



Img3:



Output



Observation

Determined the geometric transformations (homographies) between the images and stitched them into a single image. Simple averaging for Blending resulted in different intensity values in different parts of the output image and caused seam. Even though averaging based on weighted sum gave a better output than normal averaging, intensity difference was still present. Median based blending gave much better result.