CS426/CS5310/EE513 Computer Vision /CS5310
Spring 2017

Assignment 4: Feature Matching

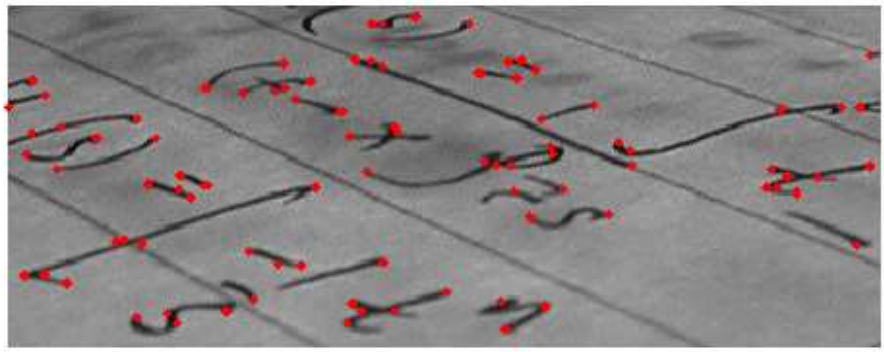
Due Midnight, Monday, Apr 03rd, 2017

To be submitted electronically on LMS.

Task 1

- Implement the KLT Detector and show your results on the Castle, CVLab, Lib and Monopoly datasets. Your corner detector algorithm should be a function that takes as input an image and any other required arguments and returns the detected corners. This function should them be used in main file (runme.m) to detect corners on any given image.

  The desired output should be in the format illustrated given below:

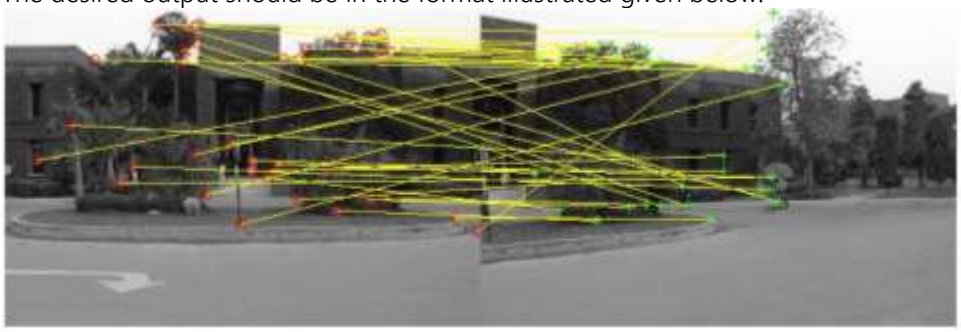


Task 2

- Implement a feature matching approach using a nearest neighbor approach. Your matching algorithm should compare each feature in left image with all the features in the right image. This will result in a MxN matrix of similarity scores. You should then apply Hungarian search to find the best match.

  Your feature matching algorithm should be a function that takes set of features from both the images and return their correspondence.

  The desired output should be in the format illustrated given below:



Submission

- Submit a folder containing all your m-files and a “runme.m” file that test each of your implemented functions
- Submit a document that shows and discusses your results
- Report must contain all the references that you have used
- Submit a folder containing all your results
- Submit any additional images that you have used
- Please also check late submission policy on LMS