Assignment 1 - Create a collage using Hybrid images
Instructor - Dr. Abhinav Dhall
CSL 462 and CSL 618
Due: 25/08/2019 11:59 PM

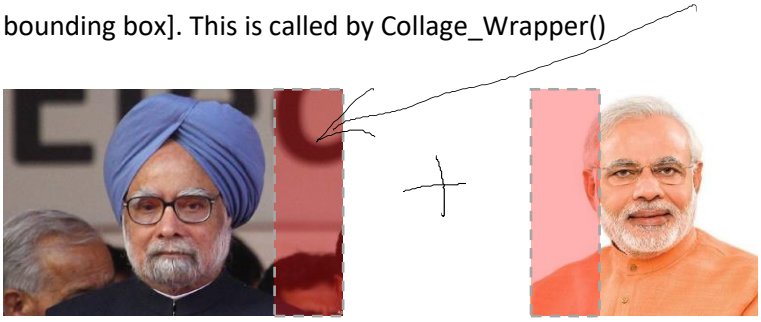
Submission:
Upload on Moodle. If Moodle is not working in the last 2 hours before submission you may email the TA and myself with the subject title: "[CSL462] Assignment 1" or "[CSL618] Assignment 1".
Report and code need to be submitted.

Plagiarism
Higher-level discussion is OK, however, this is an individual assignment. Code and report will be checked for plagiarism and negative marks will be awarded in case of plagiarism.

Objective: Create a set of functions in Matlab, the end goal is to create a collage from a set of input images.

Collage_Wrapper(): Takes a directory address as an input and reads all the images in the directory. The function resizes images appropriately. It decides of the location of the input images in the output image and calls the function below for joining two images. [This function will be called during the evaluation].

CreateHybridImage(): Takes four inputs - Image1, [Over lapping bounding box], Image2, [Over lapping bounding box]. This is called by Collage_Wrapper()



CreateHybridImage() returns the fused hybrid images. The fusion is performed on the overlapping areas as shown in the highlighted areas in the images above. The Hybrid image from the two images above is computed only on the overlapping area and then the images are combined.
Overlapping bounding box example: [100 100 200 200];

You can add more functions, the two above are required with comments.

Report needs to be written in Latex and the format is BMVC extended abstract.
The link: http://bmvc2015.swan.ac.uk/wp-content/uploads/2014/08/BMVC2015_sty_final.zip contains bmvc_abstract.tex and example pdf - bmvc_abstract.tex

The report needs to mention the approach followed, the main functions description and sample output images.

Grading scheme:

Total marks: 10

1. Correct working - 5

    2 marks for hybrid image and 3 marks for collage formation

2. Report quality - 3

3. Image spatial location in the collage not a basic *m x n* block structure, where images are simply appended. For joining two images *CreateHybridImage() needs to be closed.* 1 Mark for the structure and arrangement of images in the output collage.

4. Innovative method of fusion of Hybrid Images - 1 Mark

Note the final mark in #4 above is strictly based on the Instructor.