

EEE-6512 Image Processing and Computer Vision

Fall 2017 Homework #1

August 22, 2017

Due: September 1, 2017, 11:59 PM

This assignment should be completed individually by the student. Late submissions will not be accepted. Proper citation should be provided for any references used.

Part I Textbook Questions [50 points]

Answer the following questions found on pg. 17-19 of the textbook:

1-4, 1-8, 1-16, 1-17, 1-18

Part II MATLAB Programming [50 points]

You are to write a MATLAB function *flipim* that accepts an image of any size stored as a matrix, displays the image to the screen, rearranges the quadrants of the images as depicted below, displays the rearranged image to the screen, and returns the rearranged image which is the same size as the original image as a matrix.

Original Image

1	2
3	4

You are not allowed to use any built-in functions from MATLAB's image processing toolbox to perform the image flip. You are allowed to use built-in functions for reading and displaying the images.

Returned Image

4	3
2	1

To receive full credit for this assignment you must submit two files. **1.)** A document containing the answers to the textbook question (.DOC, .DOCX, or .PDF file). **2.)** A M-file containing **commented** MATLAB code for the function *flipim* (.M file). Students should insure that their M-file executes without errors to avoid receiving point deductions.