

CSE152a – Computer Vision – Assignment 0

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Revision 0

Instructions:

- Submit your assignment electronically by email to obeijbom@cs.ucsd.edu with the subject line *CSE152 Assignment 0*. The email should have two files attached.
 1. A pdf file with your writeup of the color problem. This should have all code attached in the appendix. Name this file: `CSE_152_hw0_writeup_firstname_lastname.pdf`.
 2. A compressed archive with your matlab code files for the color problem. Name this file: `CSE_152_hw0_code_firstname_lastname.zip`.The code is thus attached *both* as text in the writeup appendix and as m-files in the compressed archive.
- No physical hand-in for this assignment.

Description

The purpose of this assignment is to gain some familiarity with Matlab programming. Matlab is intuitive and easy to use! Even if you do not understand a command or a feature of the language, you can simply consult the reference manual that comes with the program.

Piazza

Visit the `cse152` discussion board and sign up at <http://www.piazza.com> (search for University of California, San Diego → CSE 152). This will be used to answer questions regarding the course. If you are unable to join piazza because you dont have a UCSD email, email obeijbom@cs.ucsd.edu

Tutorials

Complete the two matlab tutorials found at:

- http://cseweb.ucsd.edu/classes/wi13/cse152-a/hw0/matlab_intro.m
- <http://www.math.utah.edu/lab/ms/matlab/matlab.html>.

Play with colors

Using your new found Matlab skills, write a program that does the following:

- Read in an image.
- Resize the image to 256 x 256 pixels using bilinear interpolation.
- Tile the image to form 4 quadrants where
 - The top left quadrant is the original image
 - The top right is the green channel of the original image (other channels set to zero)



Figure 1: Output of flag problem

- The bottom left is the red channel (other channels set to zero)
- The bottom right is the blue channel (other channels set to zero)

Test your program with the given image `flag.jpg`. Your program should be short (5 to 10 lines), and your result should match Figure 1. Then, write a short paragraph explaining your results. Does your program produce the correct output? Does the red/ green/ blue channel separation make sense?