

CS182/ECE160 Homework #2

Part I:

- Book Chapter 7: Question 6 and 7
- Book Chapter 8: Question 2, 6 and 7

Submit your answers to Part I **before Wed. April 21's Lecture**

Part II:

- Edge detection is an important tool for image processing. You can download a matlab based edge detection code at <http://www.cs.ucsb.edu/~htzheng/teach/cs182/schedule/edgedetection.m>, and <http://www.cs.ucsb.edu/~htzheng/teach/cs182/schedule/d2dgauss.m>, and the lena.jpg image <http://www.cs.ucsb.edu/~htzheng/teach/cs182/schedule/lena.jpg>

Search the Web to find out about the Canny based edge detection. Write a short essay to describe the edge detection and how it is implemented in the above matlab file. Your essay cannot be shorter than 100 words, or longer than 200 words.

- Book Chapter 6: Programming assignment **#16** and **#17**.

For 17, we provide a movie file in .avi format at

<http://www.cs.ucsb.edu/~htzheng/teach/cs182/schedule/foreman.avi>

You need to use **aviread** to read video frames. Use matlab help to understand aviread.

You need to submit (1) your essay, (2) the matlab code for #16 and #17 and (3) the answers to their questions via TURNIN; Use **hw2** (rather than lab1 used in project 1) in your turning command. Check project 1 description for more information on turnin.

Submit via turnin **before 11:59pm Friday April 23**