CS 560 Advanced Topics in Artificial Intelligence
Computer Vision (Winter 2015)

HW2 (8%)

- Assigned date: 01/29/2015
- Due date: ~~02/06/2015~~ 02/07/2015
- Electronic submission via CSNS. Include your name and CIN# in your program.
- Submit source codes.
- Submit `readme.txt` file in your submission. Explain how to compile, run and test your program in very detail.

Download testdata.zip (the data set has been changed slightly.)

Write a Computer Vision Detection program that receives one of the following options from the user, and performs the selected task.

1. Line Extraction (1%)
    Extract lines from any Images
2. Coin Extraction (3%)
    Extract coins from coin images.
3. Balloon Extraction (4%)
    Extract balloons from balloon images.

   Extra-credit:
    Propose and implement a simple method to tell whether or not the input image contains any coins or balloons. For example, if the user enters balloon2.jpg for the task 2, your program displays "No Coin Detected".

o For each task, allow the user to choose an image from the given test images.
o After performing the selected task, display the options for the next task.
o For each task, display input and output images on the screen. For the output image, draw lines, outlines of coins, or outlines of balloons on the input image.
o Submit `solution.doc` file in your submission. Describe your algorithm/method that you used to solve each problem. Properly disclose your references. If you got the entire solution for any task from available codes on the Internet, you will NOT receive full credit.
o If you program produce any compile or run time errors, you will NOT receive full credit.