Gebze Technical University
Department of Computer Engineering
BIL 665 / BIL 463
(Introduction to) Computer Vision
Fall 2015
HW1
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Download and install OpenCV. Installation of OpenCV might be different for different OS'es. For Ubuntu, I followed the procedures listed at https://help.ubuntu.com/community/OpenCV and it worked fine. For Windows and other OS, go to http://opencv.org/.

Compile and run some of the sample code and Tutorial code until your are comfortable with the environment.

In this homework, you will capture images from a web camera and apply two thresholding methods to the live image.

The first thresholding method gets the image frame from the camera, converts it to grayscale, and forms an histogram image of the input image. The user than clicks on the threhold spot on the histogram image and the resulting binary image is shown. The image histogram is calculated by countinf the number of zero intensity pixels, one intensity pixels, … etc. If the use wants to repeat, then the process repeats.

Your second method will get a frame from the web cam and apply binary thresholding to the image (using OpenCV function threshold) and show it on screen and continue doing this until user enters ESC. You will get the threshold value from a track bar (use createTrackbar) function.

The OpenCV tutorial at file threshold.cpp is a good way to learn how thresholding works. There are many sample programs that show how to capture frames from a camera.

You will demo your program after the class in the project lab. You will download your program from moodle, then compile and run. Please bring your web camera for the demo.

Zip your .cpp file and a few screen captures into a single file and submit to moodle.