## Gebze Technical University Department of Computer Engineering BIL 665 / BIL 463 (Introduction to) Computer Vision Fall 2016 HW1 Oct 23rd 2016

Download and install OpenCV. Installation of OpenCV might be different for different OS'es. For Ubuntu, I followed the procedures listed at <a href="https://help.ubuntu.com/community/OpenCV">https://help.ubuntu.com/community/OpenCV</a> and it worked fine. For Windows and other OS, go to <a href="http://opencv.org/">http://opencv.org/</a>.

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 or system camera, find the brightest spot on the the images, and mark them with small circles.

Your program should do this process at least 5 times a second.

There are many sample programs that show how to capture frames from a camera.

- Do not use any available image processing functions from OpenCV. You should access each pixel one by one and make your brightness decision yourself.
- Your program should do this process at least 5 times a second.
- 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.
- YOU WILL NOT BE ALLOWED TO MODIFY YOUR PROGRAMS. YOU WILL RUN YOUR PROGRAM FROM THE COMMAND LINE ONLY.
- Zip your .cpp file and a few screen captures into a single file and submit to moodle.

Bonus: find second and third brightest spots and show them with different colors.