CS677: Advanced Computer Vision, Fall 2017

Clarification for HW2, part (b)

As discussed in class, the implementation of Watershed in OpenCV is a bit different than in the FP book.

There are two acceptable ways for you to complete this assignment:

1. Follow the steps in the tutorial given in OpenCV http://docs.opencv.org/3.2.0/d3/db4/tutorial_py_watershed.html . This tutorial uses many functions we have not explicitly discussed in class though you can generally understand what they do by the given examples. If you copy the code exactly, there is only one parameter left to set: in "# Finding sure foreground area section", there is a number, 0.7, which is a type of threshold. You can try a few values of this parameter to see its effect.

2. Create a marker array of image size with all zero values. Then set marker pixels at some fixed spacing, say every 16 pixels apart in both rows and columns. Make sure that these markers all have a different integer value, such as 1,2,3.... . Then simply apply the Watershed function with image and this marker. Now the results will be like superpixel segmentation. Number of regions will depend on the spacing of the pixels; this is the only parameter we can change. If you use this method, it will not be meaningful to compare with the ground truth results.

Note that you only need to do one of the above, not both. Also, note that the Watershed algorithm works only with grey-scale images so you need to use cvtColor to convert color images.