

Digital Image Processing – Spring 2017

Assignment No. 4- Morphological Operation and Blending

Due date: July 2, 2017

Keyword: Morphological Operations, Gaussian Pyramids, Laplacian Pyramids.

Programming Language: C++/Python with OpenCV

In this assignment you are required to develop an application that blends one image into the other. Given a base image **B** and an image **A** to be blended into **B**. Assume the image **A** includes one main object and it's easy to binarize (extract this object). Assume the two images are given in gray scale.

Follow the following steps to develop your application

1. Binarize the image **B**, you can use Otsu's thresholding
2. Extract the boundary of the object using morphological operations
3. Use the extracted boundary to guide building the object of **A** into the base image **B**, at location (x_b, y_b) , where (x_b, y_b) is the location of the top left corner of the object in **A**

Submission:

You are required to submit a standalone application that accepts the two images and an offset $\{(x_b, y_b)\}$ and outputs an image that includes blending the object of the the second image into the first (base) image. You need to submit an executable and source code.

blend base_img blend_img x_b y_b