MIT CSAIL

6.869 Advances in Computer Vision

Fall 2016

Problem Set 2: Hybrid images

Posted: Thursday, September 15, 2016	**Due:** Thursday, September 22, 2016
Your report should include images and plots showing your results, as well as pieces of your code that you find relevant.	

Problem 1 *Hybrid images*

In this problem you will create hybrid images as described in [1].

Take two images, A and B, that you'll want to have blend from one to the other. Try to make the objects in the two images occupy more or less the same region. Construct a hybrid image from A (to be seen close-up) and B (to be seen far away) as follows:

$$\text{out} = \texttt{blur}(\text{B}) + (\text{A-}\texttt{blur}(\text{A}))$$

Where `blur` is a function that low-pass filters the image. You should write your own blur function. You can use a Gaussian filter or try other blur filters such as the box filter. Which one works best? Try different sigmas for the Gaussian. How does the amount of blurring affect your perception of the results?

Submit your images, results and code.

References

[1] Aude Oliva, Antonio Torralba, and Philippe G Schyns. Hybrid images. ACM Transactions on Graphics (TOG), 2006. `http://cvcl.mit.edu/publications/OlivaTorralb_Hybrid_Siggraph06.pdf`.

[2] Eero Simoncelli. matlabPyrTools. `http://www.cns.nyu.edu/~eero/software.php`.