REU Summer 2013

Exercises. Session 5

1. Implement the Lucas-Kanade Optical flow algorithm. Follow the directions from Dr Shah's class.
2. Download another implementations of Optical Flow from Ce Liu, and Tomas Brox webpages. <http://people.csail.mit.edu/celiu/OpticalFlow/>

<http://lmb.informatik.uni-freiburg.de/resources/binaries/pami2010Matlab.zip>

Test the optical flows in some couple of images that you can get. From your point of view which one is better?

1. Implement a Bag of Words approach classification using the 15 scene categories dataset. Use SIFT dense sampling as image descriptor.

A common way to show classification results is called n-fold cross validation. In this approach, you split your data in n subfolders. Pick one folder as testing data, and use the remaining n-1 folders images as training data, and only. Repeat the process for all the subfolders. Your result is reported as the average accuracy of the n tries.

Report your accuracy using 5-fold cross validation.