# 16-720 Computer Vision Spring 2016

# Azarakhsh Keipour (akeipour@andrew) Assignment 5

## Q 1.1 Image gradients

The ‘mygradient’ function implements computation of the image gradients using  Sobel filter. The visualization of the magnitude and orientation of test images ‘test0’ and ‘test1’ is shown in Fig. 1 and Fig. 2 respectively.

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| --- | --- |
| C:\Users\Azarakhsh\Desktop\CMU\Vision\Homework 5\My Code\results\q1.1_test0_mag.png | C:\Users\Azarakhsh\Desktop\CMU\Vision\Homework 5\My Code\results\q1.1_test0_ori.png |

Figure 1. Visualization of the magnitude (left image) and orientation (right image) of test image ‘test0.jpg’.

|  |  |
| --- | --- |
| C:\Users\Azarakhsh\Desktop\CMU\Vision\Homework 5\My Code\results\q1.1_test1_mag.png | C:\Users\Azarakhsh\Desktop\CMU\Vision\Homework 5\My Code\results\q1.1_test1_ori.png |

Figure 2. Visualization of the magnitude (left image) and orientation (right image) of test image ‘test1.jpg’.

## Q 1.2 Histograms of gradient orientation