Name: _____

Score: /0

CSE 5524 Computer Vision for HCI AU'XX

Homework Assignment #0

Due: Never (Example only)

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1) Test MATLAB's ability to load data from a text file. Use data.txt from the class webpage. [0 pts]

```
data = load('data.txt');
```

2) Plot the data, which consists of x,y-vectors with one vector per row. What can you say about the data from its appearance? [0 pts]

```
plot(data(:,1),data(:,2),'.');
axis equal;
pause;
```

3) Compute the dot product of all data vectors with the following vector. Then compute the mean of the absolute values of all the dot products. Use for loops. [0 pts]

```
vector=[ 0 1 ];
```

4) Now compute the same value using MATLAB's vector arithmetic. [0 pts]
(Hint, look up the 'sum' function and the '.*' operator.)

5) Calculate the mean dot products for a number of vectors with varying angles. [0 pts]

```
vectors=[ sin(pi*(0:10)/20); cos(pi*(0:10)/20) ]';
```

6) Plot the mean values as a function of angle. What does this tell you about the variance of the data? [0 pts]

```
plot(9*(0:10),dotresults);
pause;
```

7) Turn in all code, test images, printouts of images, and discussion of results. Make a HW0.m script to do the above tasks and call needed functions. Upload your code and selected images to Carmen. [0 pts]