Final Project (Option 2)

1. Implement the illumination cone algorithm.

2. Use your code to find the illumination cone of a set of (frontal illuminated) images of a convex object. You can use the image set provided in the course webpage or construct your own.

3. Generate a set of images showing the above (learned) object with previously unseen illuminations.

4. Optional: Create a movie (.mpeg, or .avi) showing the images with a rotating light source.

+ Here is an example obtained with the images you will find in the course webpage.

- Original face images (6 images):

- These are the eigenvectors obtained with the method presented in class:
Now we have the illumination cone. We can thus generate new images by drawing sample vectors from within it. A few examples follow:

Write a short summary describing what you did and what you learned. The summary should not exceed three pages (12 point font). You may include 2 additional pages to show your results. Do not exceed these limits.

**Deadline:** Email your summary and code to the instructor by noon on Tues, March 11, 2008.