Homework 1 (30p)

1. Install OpenCV on your computer
2. (5p) Take one color picture of your face and convert it to grayscale using OpenCV. Use medium image size (1 megapixel)
3. (10p) Do something interesting with both the color and gray versions (at least 5 transformations/changes, do some search):
   - Blurring
   - Change the color scheme (switch color planes)
4. (10p) Create a Gaussian pyramid of your face image and display it as a single image. Note that this requires that you figure out how to pack images of various sizes into a single (larger) image. Your composite image should not be very large. What is the space requirement for the pyramid? What is the size of the smallest rectangular image needed to pack your pyramid.
5. (5p) Find an interesting application of Computer Vision and post the link to it. Be prepared to give a short description of it in class.
6. Post the results and your programs/scripts on your webpage; write a report describing your work. Your report must be clear and as brief as possible without compromising comprehension. Submit your report with the link to your webpage on the blackboard. Email zduric@gmu.edu your picture with a few lines about yourself. Make sure that you put '[CS 682] Personal Info' in the subject of the message.

- **Late policy:** You have a budget of 10 late days for all your homework. Once the late days are used up no homework will be accepted.