INF 4300 - Exercise for Friday 17.09.2010

Texture

Use images from http://www.ifi.uio.no/~inf3300/bilder/.
The images `zebra_1.tif`, `zebra_2.tif` ... `zebra_6.tif` contain some fine specimens of a particularly textured herbivore. We will try to implement a zebra-detector by analyzing texture.

First, try to implement your own GLCM function that takes as input an image window and number of image greyscales and outputs a co-occurence matrix. Derive variance, contrast and entropy from the GLCM of a sliding window at a suitable size.

Try to use a simple tresholding of these features to mask out the zebras in the images.

Then compare your result with the first order texture measures: variance and entropy by using the Matlab functions: `stdfilt` and `entropyfilt`.

If you have time, try to use Laws texture masks to analyze the image with a suitable mask or two. Remember to average energy over windows. Laws masks can be built and applied with `conv2` function in Matlab.

Happy zebra hunting!