TNM087 - Image Processing and Analysis

BasicImageInfo.m

Background:

In Matlab gray value images are matrices and color images are three-dimensional arrays. In the following we will use the terms ‘column’ and ‘row’ in connection with images to mean a line in y-direction (column) and a line in x-direction (‘row’). Note that the first index in a matrix is the row index and the second the column index. Therefore: image(m,n) is the pixel at position (n,m) in the gray value image if we use the (x,y) = (width, height) coordinates for images and the (row, column) convention for matrices.

Basic commands handling image files are imread, imwrite and imfinfo

Ordinary jpg image have 8bits/pixel/channel, tiff images can have 8bits/pixel/channel or 16bits/pixel/channel

Typical Matlab commands to display images are imshow, image, imagesc, imshowpair and for more advanced operations imtool. Read the Matlab documentation for details

The coordinates of the cursor can be captured with the ginput command.

Task:

Write a Matlab function that extract basic information about an image. Details are in the template file

Syntax:

```
function [ ImSize, ImType, BitPerPixel, MaxMin, RGBpts, figh ] = ...
    BasicImageInfo( filename, nopts)
```

Hints:

Read the documentation of some basic tools in the Image Processing Toolbox