

Project proposal
Pseudo-Colour Image Processing

INTRODUCTION:

Pseudo-colour (also called false colour) image processing consists of assigning colours to grey values based on a specified criterion. The term pseudo or false colour is used to differentiate the process of assigning colours to monochrome images from the processes associated with true colour images.

Project focuses of achieving pseudo-colour image using MATLAB programming and image processing toolbox.

OBJECTIVE:

- (a) Implement an image, with the characteristic that I can specify two ranges of grey-level values for the input image and program will output an RGB image whose pixels have a specified colour corresponding to one range of grey levels in the input image, and the remaining pixels in the RGB image have the same shade of grey as they had in the input image. (intensity/density slicing)
- (b) Download the image in Fig. 1.10(4) from the book web site and process it with the written program so that the river appears yellow and the rest of the pixels are the same shades of grey as in the input image. It is acceptable to have isolated specs in the image that also appear yellow, but these should be kept as few as possible by proper choice of the two grey-level bands that have been input into the program.

DELIVERABLES:

- For the first objective a grey image is selected as input.
- A MATLAB code is written to change few pixels with selected grey intensities to two different colours.
- The output image will have colours representing two grey intensities, rest all will be as original grey image.
- For the second objective, the grey intensity depicted for the river (in figure 1.10) is figured out using MATLAB image tool's pixel inspection.
- MATLAB code is used to change these pixel values to different colour.
- The expected output will show the river in yellow and the rest of the image will be as the original.

REFERENCES:

http://www.imageprocessingplace.com/DIP-3E/dip3e_student_projects.htm#06-02

digital image processing 3rd edition, Rafael C. Gonzalez and Richard E. Woods

<https://www.mathworks.com>

