Project Proposal

Project Id : 41
Project Title : Segmentation of Color Image Using Adaptive Thresholding

GitHub Link : https://github.com/KarthikaRamineni/DIP-Project.git

Team Members:

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2) Soumya Taurani - 20161007

Main Goal :

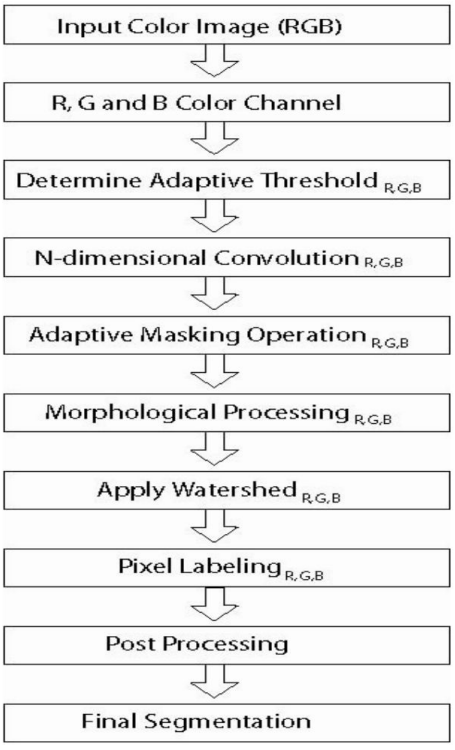
Using adaptive masking and thresholding with watershed algorithm to overcome over-segmentation problem

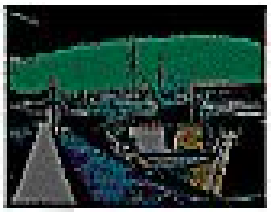
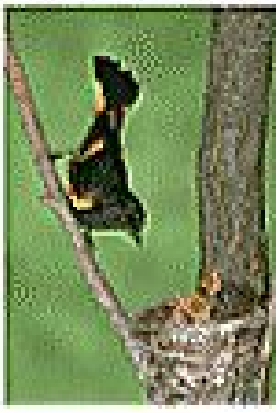
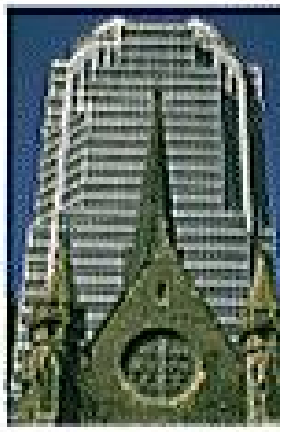
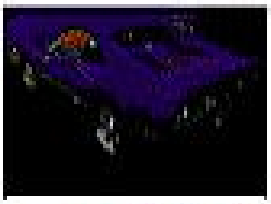
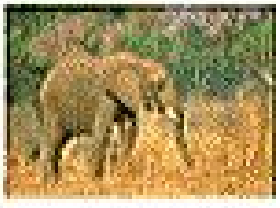
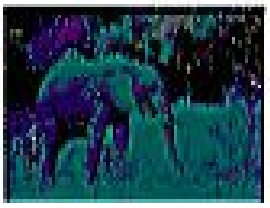
Problem Definition :

Watershed transform is an efficient morphological segmentation tool. The main drawbacks of watershed transform are over-segmentation, sensitivity to noise and high computational complexity which make it unsuitable for real-time processes. To overcome over-segmentation, we use a modified watershed algorithm by considering adaptive threshold and adaptive masking. Also, this approach is faster than other segmentation methods making it appropriate for real-time application.

Results of the Project :

The flowchart below shows the approach to the problem:



input	*output*
	
	
	
	
	

The outputs are segmented images.

Tasks for Team Members :

Alternative steps in the flowchart will be done by each team member

Project Milestones :

1. Determining adaptive threshold using dynamic threshold selection
2. Applying adaptive masking operation
3. Applying watershed transform
4. Pixel labelling

Expected Timeline :

10th Nov : Till adaptive masking

25th Nov : Full