CSI4133_lab4

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Hue Color-Correspondence Experiment

Procedure:

- Load Image (folder “images”).
- Convert Image from RGB space into HSV space.
- Isolate pixels with a specific hue value.
  - Use a trackbar to set the Hue value H_v.
  - Use loops to get all the H, S, V values.
    - if (H_current != H_v)
    - Then set H_current, S_current, V_current = 0;
- Convert the image containing the isolated pixels from HSV space back into RGB space.
- Visualize the result.

Hue Color-Correspondence Experiment (Cont.)

Analysis:

Change the Hue value using the trackbar to

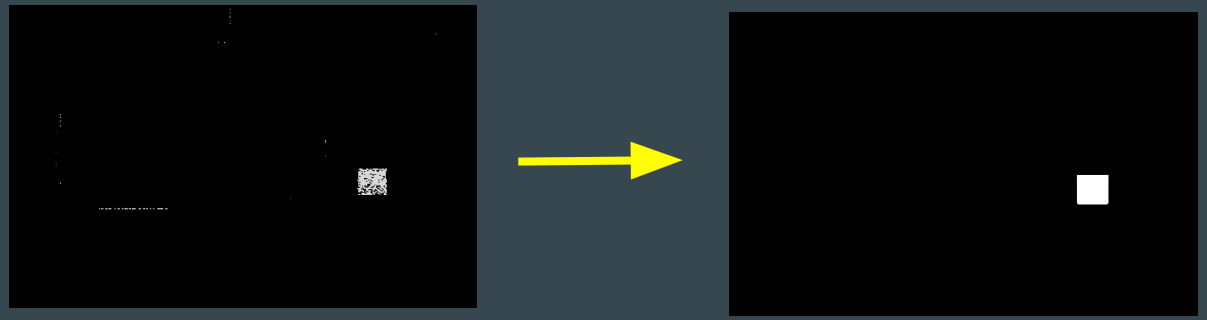
find the min_H and max_H for the

- Yellow-Green square (fifth column, second row)
- Violet square (fourth column, second row)
- Red square (third column, third row)

Colour-based Object Detection

Procedure:

- Get the appropriate Hue value/ranges for Yellow-Green square/Violet square/Red square from Hue Color-Correspondence Experiment.
- Generate the color masks and refine the color masks using
  - erode()
  - dilate()
    - Pay attention to the size of the kernel elements



Colour-based Object Detection (Cont.)

- Isolate the Yellow-Green square , the Violet square, and the Red square in the grid (create a trackbar to select among Yellow_Green(*0*), Violet(*1*), and Red*(2*)).
- Show the isolated pixels (in their original colour RGB) in a window
- Show the isolated pixels (as a binary mask of all detected pixels) in a window