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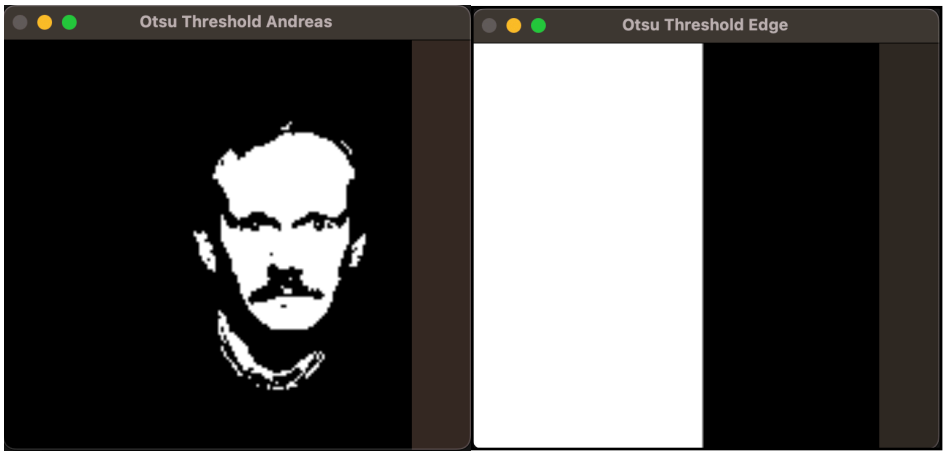
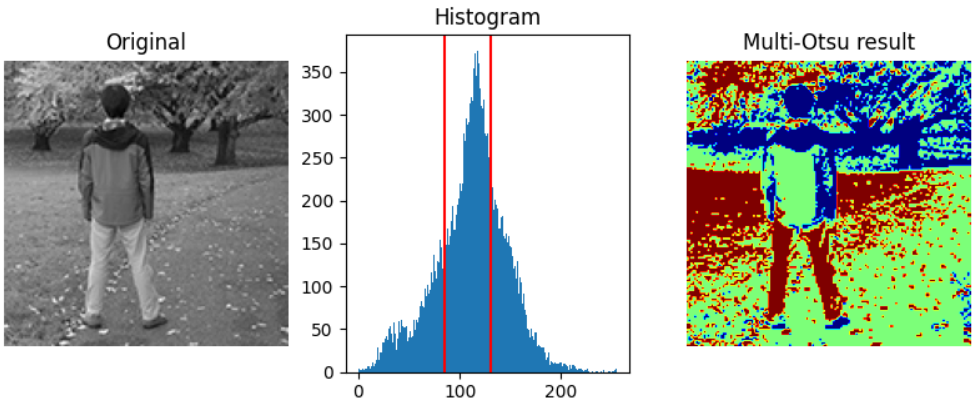
Computer Vision
Assignment 3 Report
Saturday, March 9, 2024

Otsu Method With 2 Classes



I started by loading the two images using open cv imread command, cv2.cvtColor is then applied over the image input with applied parameters to convert the image into grayscale. I then applied Otsu thresholding with an extra flag in binary thresholding for both images, giving me the result above.

Otsu Method with multiple classes



I used both open cv and pyplot to create my output, starting by loading the image as usual, and gray scaling it. I then generated regions, and thresholds using threshold_multiotsu, and np.digitize commands. I added a histogram to display the thresholds along with the original image with the results onto one plot with 3 axes.

Mean Shift Method

For mean shift I loaded the image, added a filter to reduce the noise, and flattened the image before applying mean shift to it. I then printed the amount of segments generated and it came out to be 13. I got the average color of each segment in order to cast the labeled image into the corresponding average color, giving me the result above.

Sources:
https://scikit-image.org/docs/stable/auto_examples/segmentation/plot_multiotsu.html