CST 4060 Coursework 3 : Image Edge Detection
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In this coursework, I performed edge detection on my face using various existing edge detection operators, including Roberts, Sobel, and Canny. Then, I segmented the face using K-Means clustering and applied the Canny edge detection operator with a sigma value of 13. Subsequently, I added colored edges to the detected image in green and overlaid a signature on it. To compare the results from K-Means segmentation, I also explored other segmentation methods such as Otsu's thresholding for histogram-based segmentation and Felzenszwalb's graph-based segmentation. For these methods, I similarly applied colored edges and a signature overlay to the segmented images. I can observe that the edges obtained from my K- Means gives a better face outline compared to the graph based method as it gives an outline of my hair and the otsu method as it is not able to fully detect the left side of my profile.