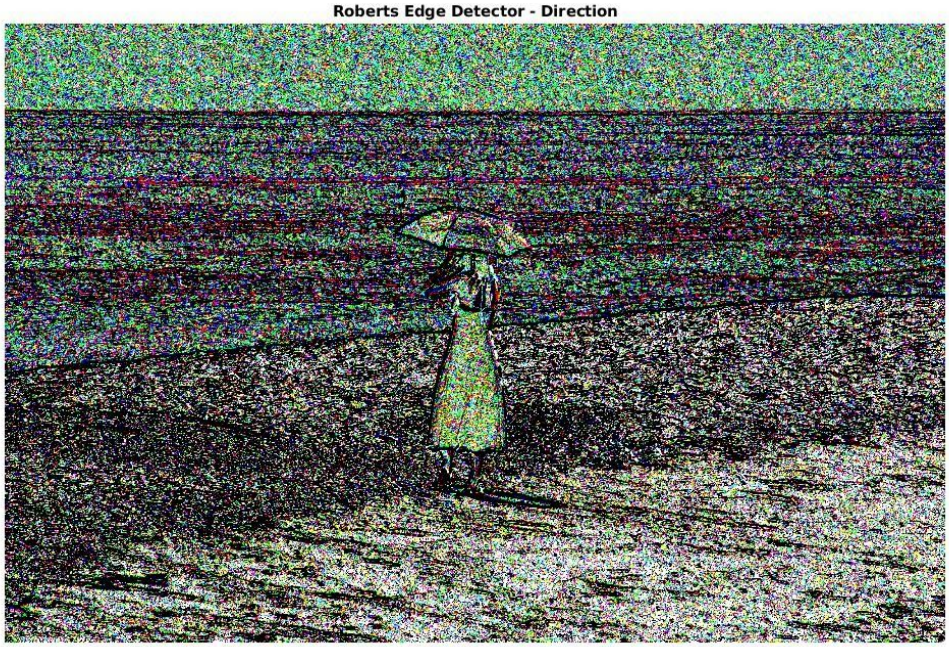
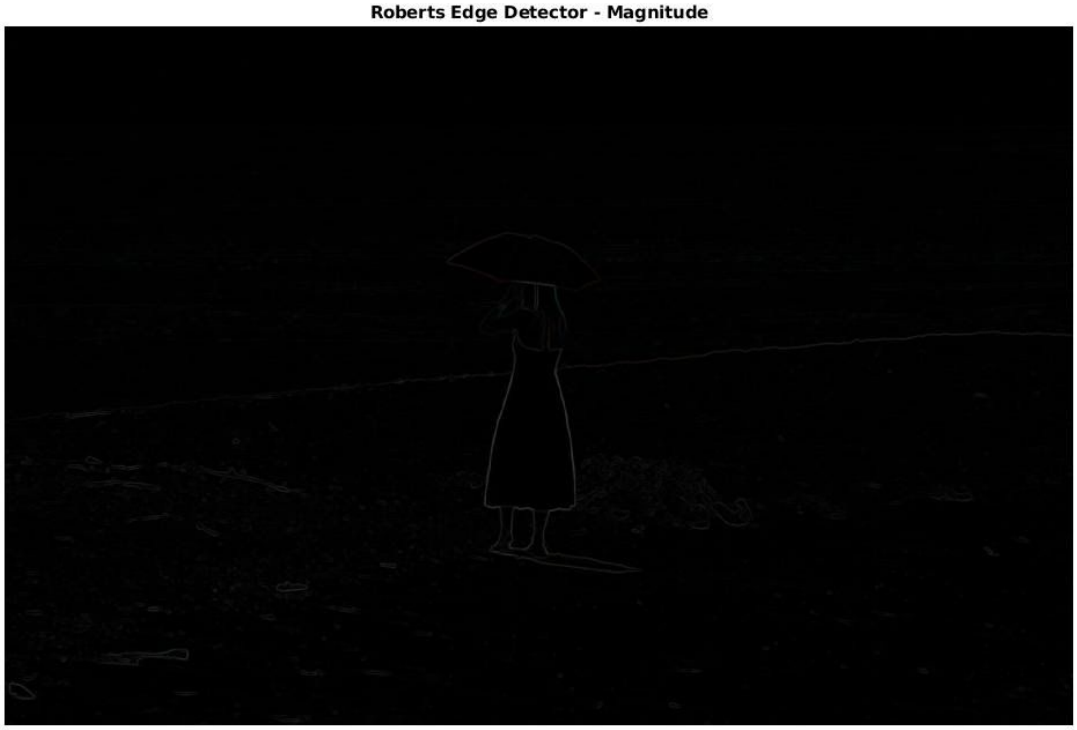
1. Edge Detection

a. Roberts Edge Detection

Roberts Edge Detector - Direction



Roberts Edge Detector - Magnitude



Magnitude image of Roberts detector is not so clear as it did not do a great job in finding edges

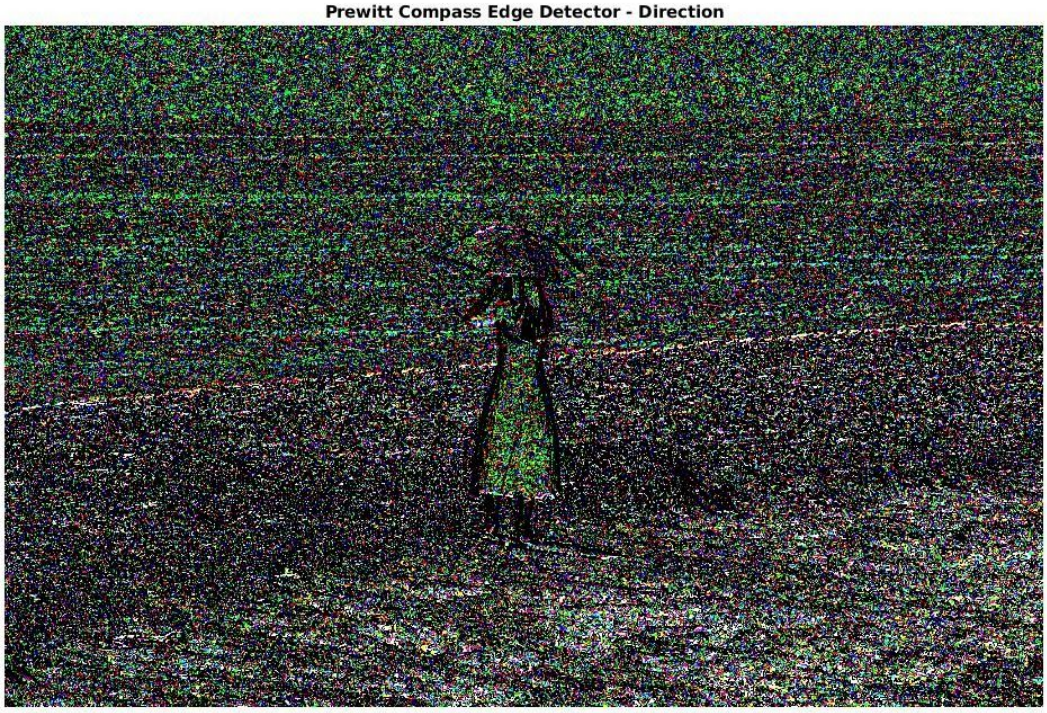
b. Sobel Edge Detector

Sobel Edge Detector - Direction

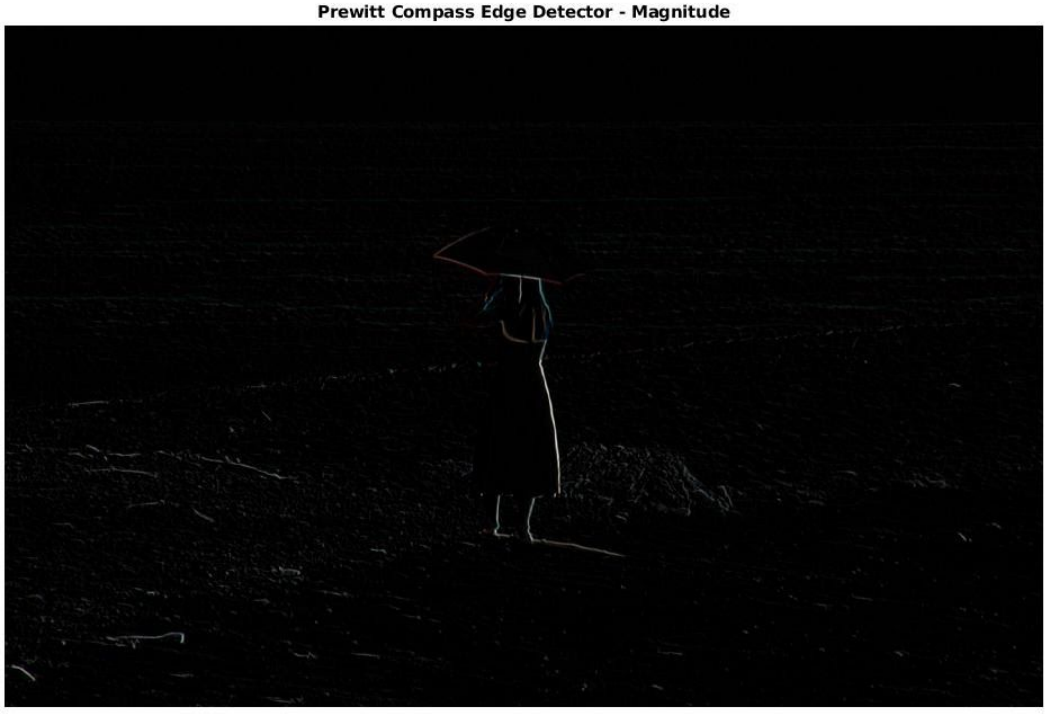
Sobel Edge Detector - Magnitude

c. Prewitt Edge Detector

Prewitt Compass Edge Detector - Direction



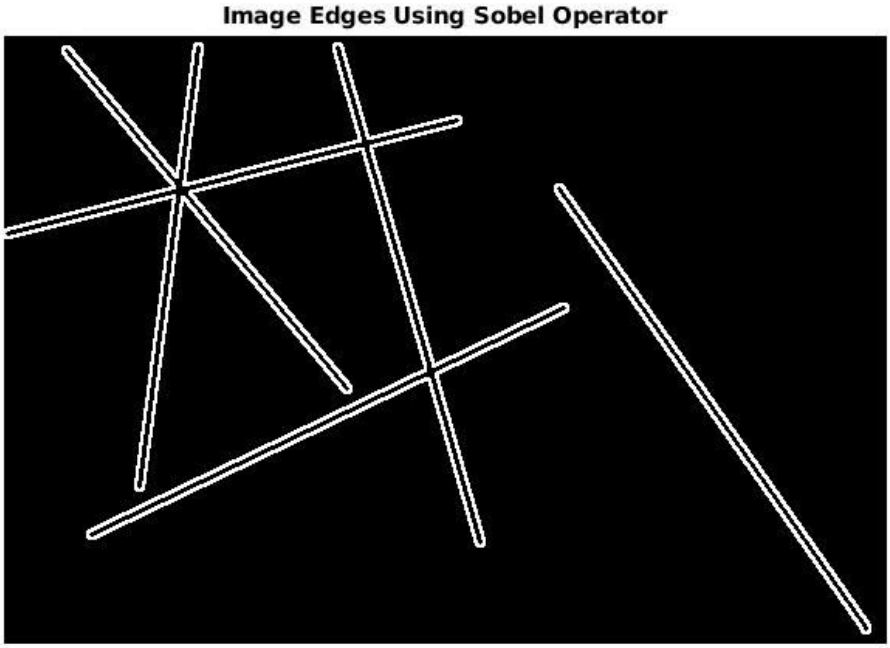
Prewitt Compass Edge Detector - Magnitude



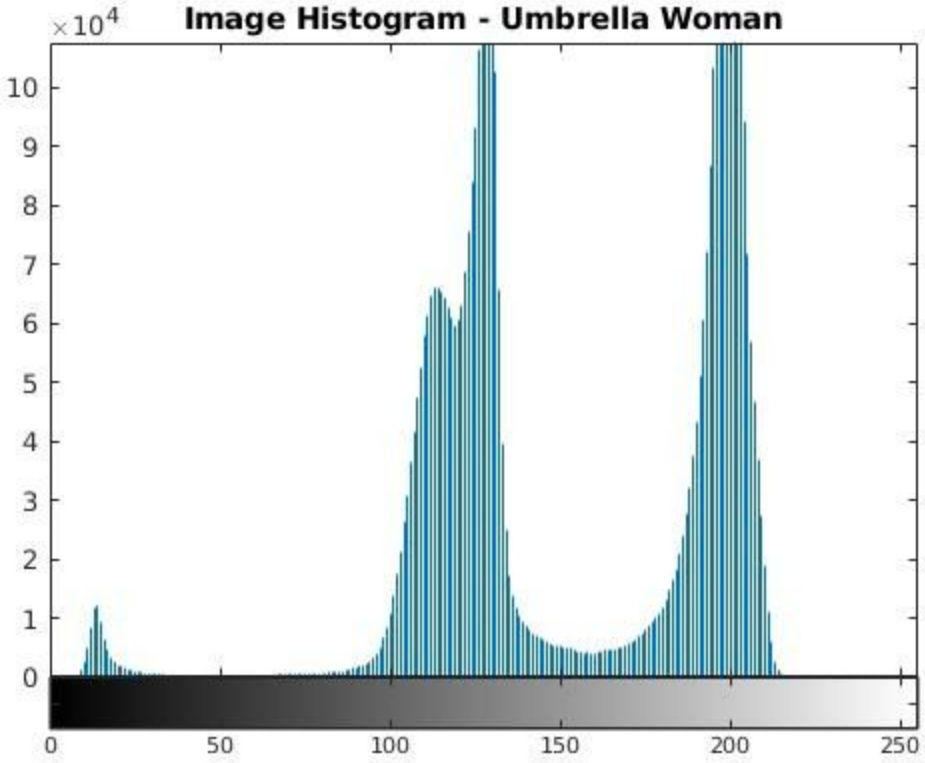
NOTE: The direction images for each detector is processed with a threshold so that it is more clear to the eyes

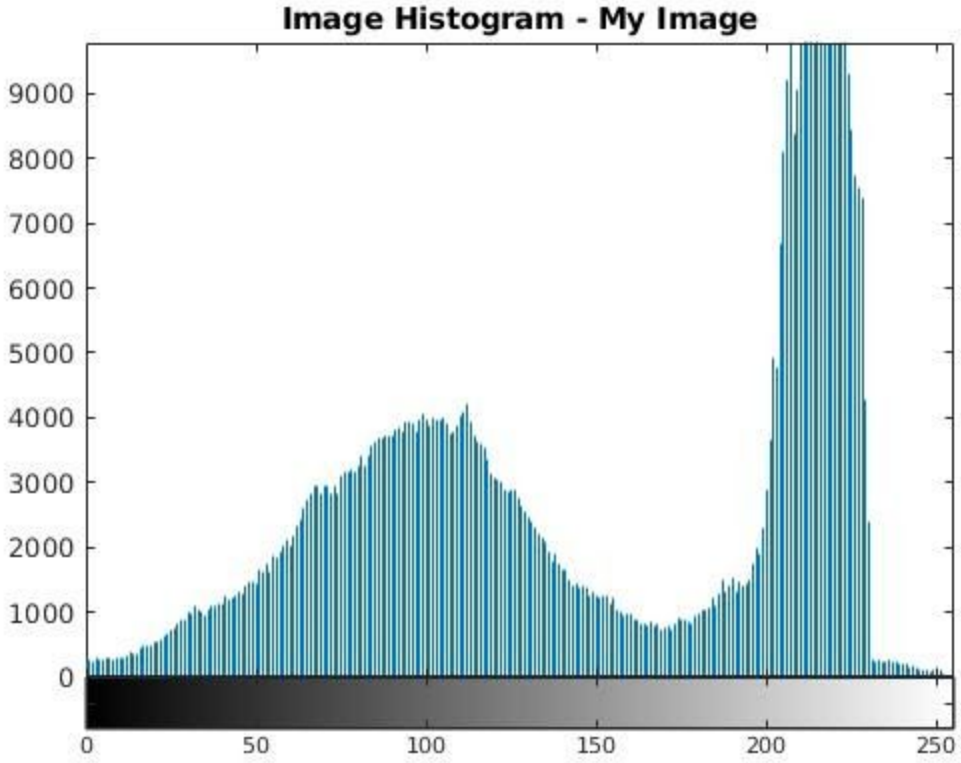
2. Line Detection with Hough Transform

- I used Sobel Edge Detector to detect lines in the image and then applied Hough Transform



3. Image Thresholding Using Otsu's Method





Thresholded Image - My Image