Assignment 1-part C

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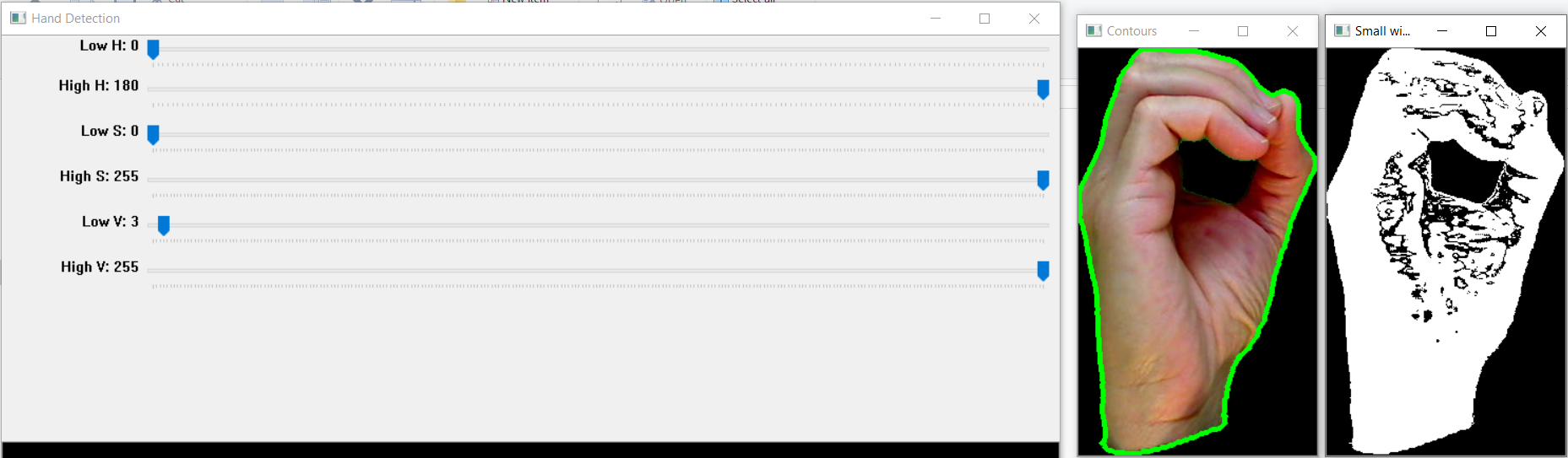
**Pre-training script**

Model Thresholds used:

low Hue = 0

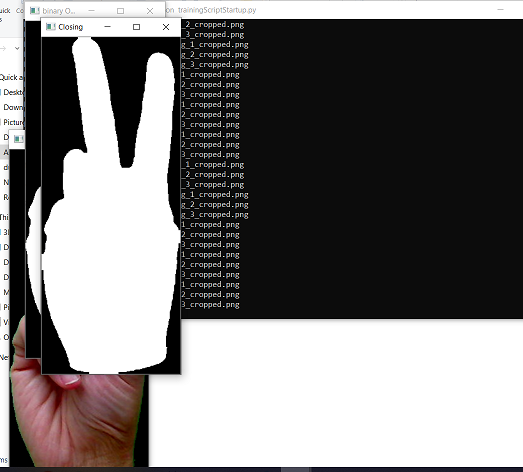
low\_Sat = 0

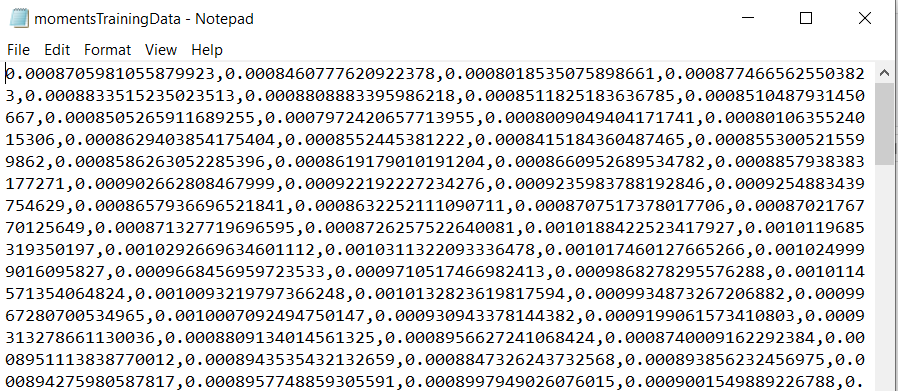
low\_lum = 3



Computing the binary image by tweaking the thresholds: These values resulted the best in getting the right edge detection and contour detection.

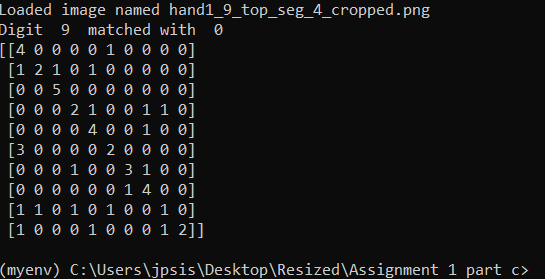
**Training Script**





Training script ran and stored in a text file in a CSV format.

**Self-evaluation phase ( Testing Script )**



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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  | Predicted Values | | | | | | | | | | |  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | Actual Values | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | | 5 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | | 8 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | | |  | | --- | | Outcome: | | Gesture 0 is match 80% of the time | | Gesture 1 is match 40% of the time | | Excellent match | | Gesture 3 is match 40% of the time | | Gesture 4 is match 80% of the time | | Gesture 5 is match 40% of the time | | Gesture 6 is match 60% of the time | | Gesture 7 is match 80% of the time | | Gesture 8 is match 20% of the time | | Gesture 9 is match 40% of the time | |  | |

This resulted in a 29/50 score.

**Other Thresholds used**

**Pre-training script**

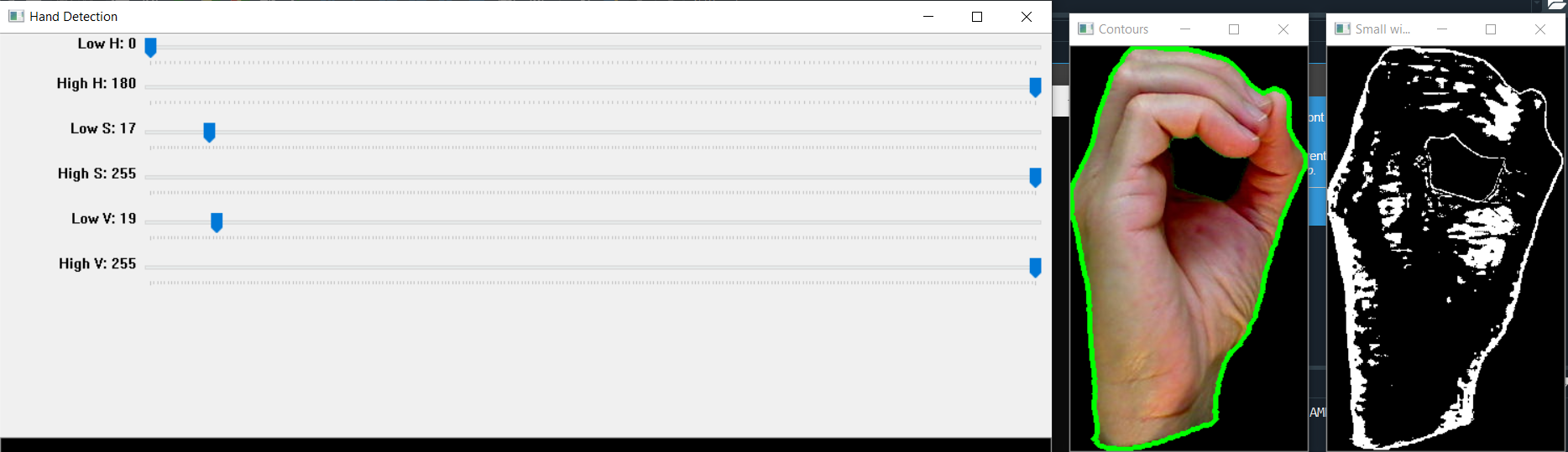
Model Thresholds used:

low Hue = 0

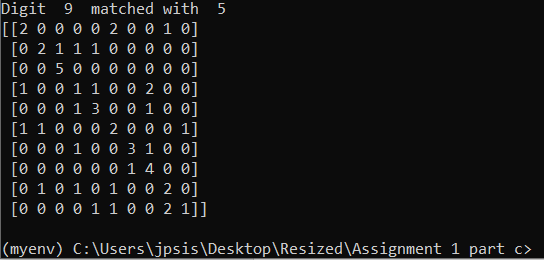
low\_Sat = 17

low\_lum = 19

Computing the binary image by tweaking the thresholds: These values resulted in good edge detection but the contour is off.



**Testing Script**



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  | Predicted Values | | | | | | | | | | |  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | Actual Values | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | | 4 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | | 5 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | | 8 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | | 9 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | | |  | | --- | | Outcome: | | Gesture 0 is match 40% of the time | | Gesture 1 is match 40% of the time | | Excellent match | | Gesture 3 is match 20% of the time | | Gesture 4 is match 60% of the time | | Gesture 5 is match 40% of the time | | Gesture 6 is match 60% of the time | | Gesture 7 is match 80% of the time | | Gesture 8 is match 40% of the time | | Gesture 9 is match 20% of the time | |  | |

This resulted in a 25/50 score.