Computer Vision Sprint 2017 Problem Set #8

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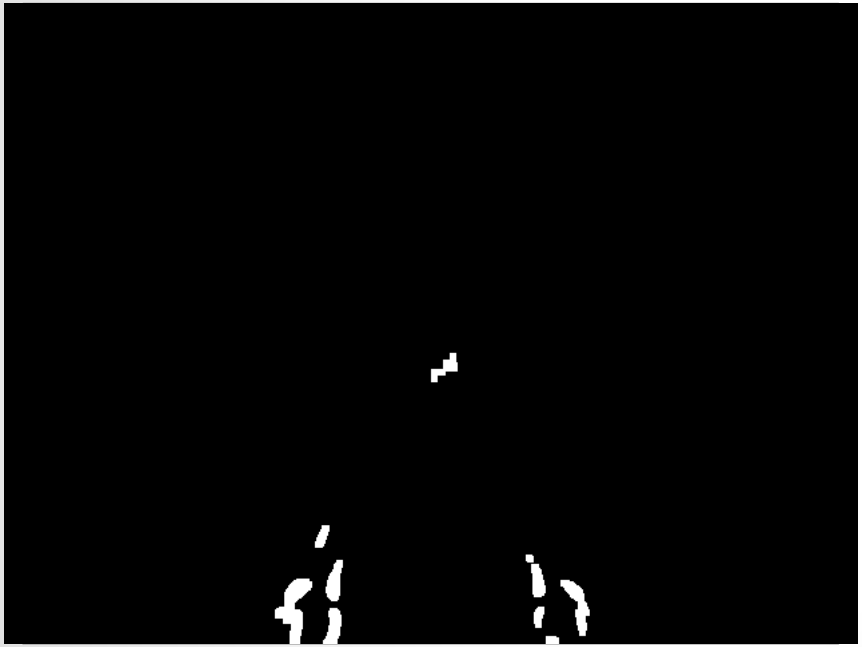
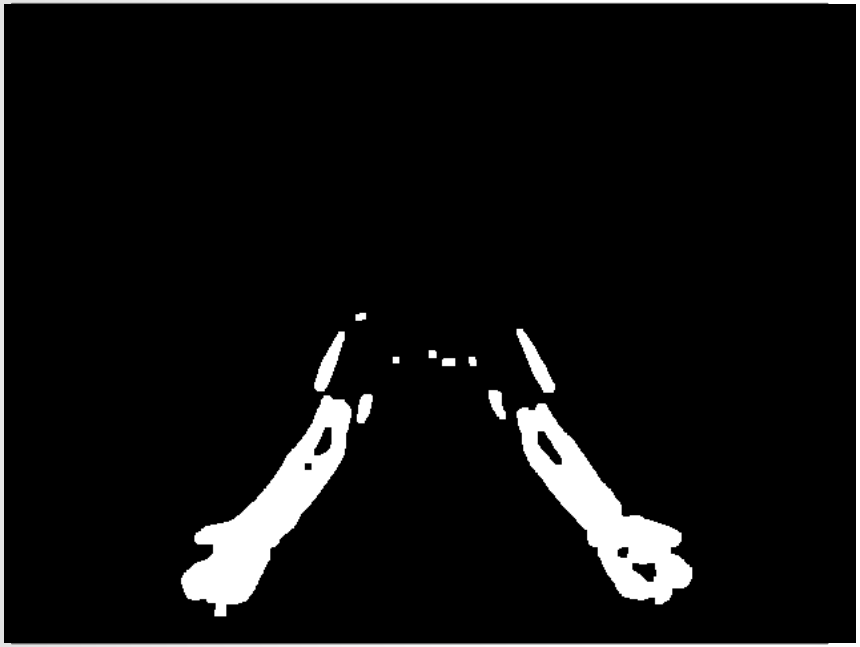
1a: Binary image for frame 10



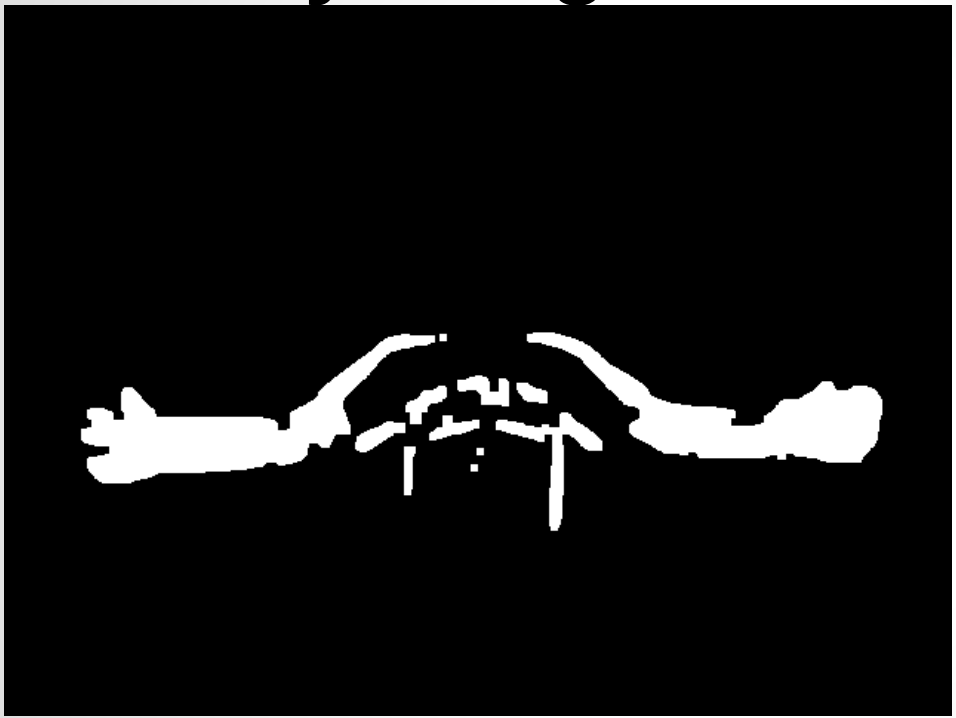
Binary image for frame 10 **- ps8-1-a-1.png**

1a: Binary image for frame 20



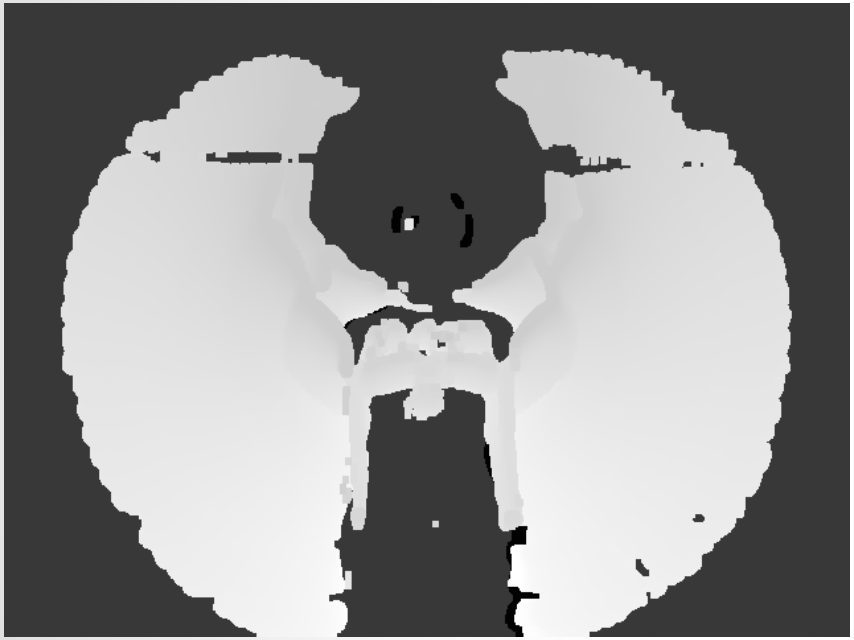
Binary image for frame 20 - **ps8-1-a-2.png**

1a: Binary image for frame 30



Binary image for frame 30 **- ps8-1-a-3.png**

1b: MHI image for action A1



MHI image for action A1 - **ps8-1-b-1.png**

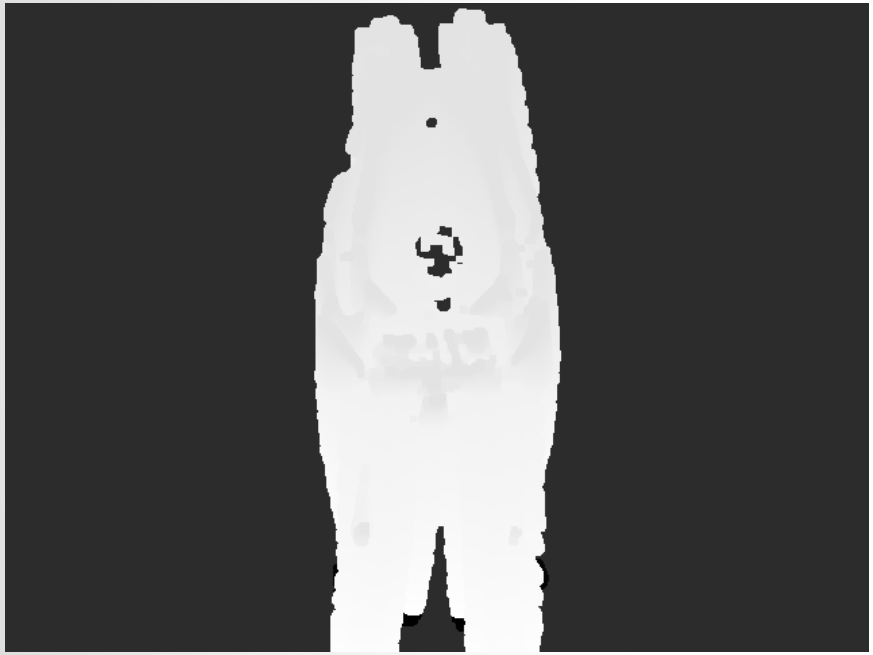
$\tau = 51$

1b: MHI image for action A2

MHI image for action A2 - **ps8-1-b-2.png**

$\tau = 22$

1b: MHI image for action A3



MHI image for action A3 - **ps8-1-b-3.png**

$\tau = 29$

2a: The best confusion matrices you achieved

i) With unscaled central moments

1	0	0
0	0.66	0.33
0	0.22	0.77

ii) With scaled central moments

0.77	0.11	0.11
0	1	0
0.11	0	0.88

Description of any change made to the distance function (if required) to achieve this result: I just used euclean distance. Scaling by the maximum value for the image degraded the results rather than improving

2b: The best confusion matrices you achieved

i) For P1

1	0	0
0	1	0
0	0	1

ii) For P2

0.66	0.33	0
0	1	0
0	0	1

ii) For P3

0.66	0	0.33
0	1	0
0	0	1

Description of actions required to achieve this result: I had to go through each video frame by frame to find mhi and tau. I also tried changing some of the theta values of the missed actions to try to classify them correctly. Using gaussian blurs helped improve the results to eliminate the body as much as possible while retaining motion

2b: Average of the confusion matrices

0.77	0.11	0.11
0	1	0
0	0	1

Important Note

Please make sure your latest ps8.py and experiment.py are set to generate the images shown in your report. We will run your algorithms again locally using the same input videos to verify these results. We will not accept modifications to these files after the deadline if running your code fails.