

CSE 5524 HW5

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1)

Input Image:

See directory "HW5"

Output Image:

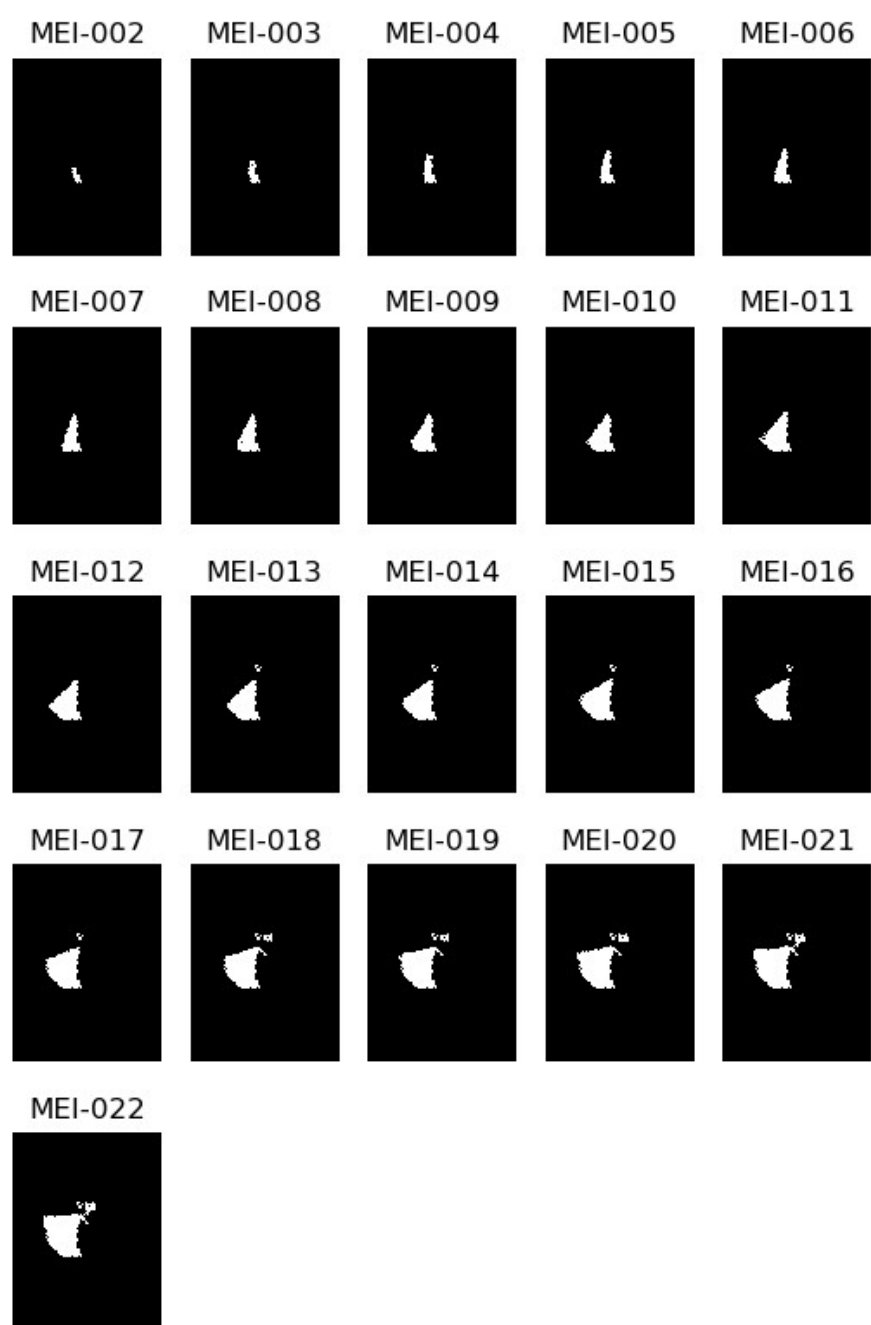
See directory "task1", in sub-directories "threshold4 ", "threshold8 ", "threshold12 ", "threshold16", and "threshold20", I tested 5 different thresholds.

2)

Input Image:

See directory "task1/ threshold8".

Output Image:



MEI

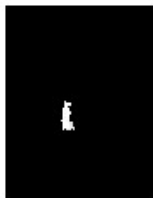
MHI-002



MHI-003



MHI-004



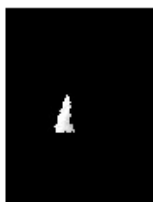
MHI-005



MHI-006



MHI-007



MHI-008



MHI-009



MHI-010



MHI-011



MHI-012



MHI-013



MHI-014



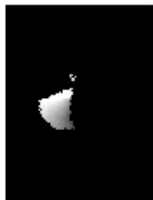
MHI-015



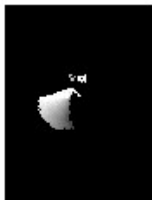
MHI-016



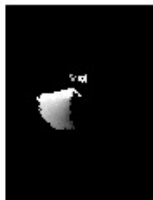
MHI-017



MHI-018



MHI-019



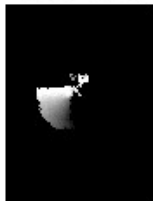
MHI-020



MHI-021



MHI-022



MHI

Results:

similitude moments of final MEI:

[0.13003656758738869, -0.0021790803541673963, -0.027469658665630906,
0.023250853102446706, 0.0981178359643474, -0.02169993298810491,
0.007214896164492844]

similitude moments of final MHI:

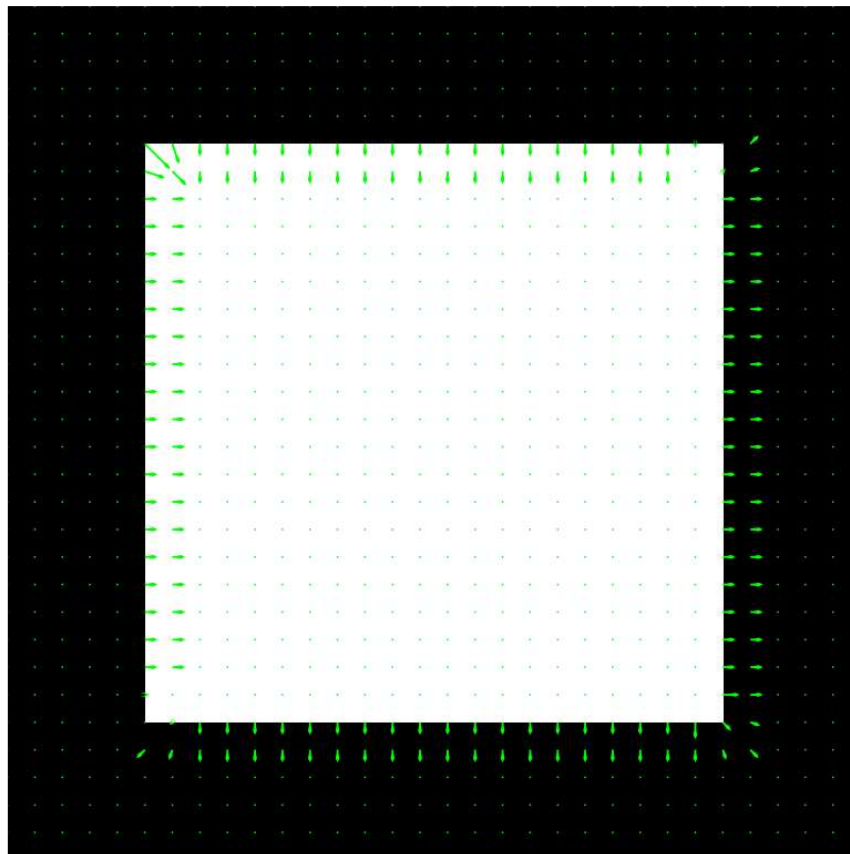
[0.15854944906418225, 0.020432345170965423, -0.07128077147499434,
0.030418455738527184, 0.17893320081802838, -0.043724388248335286,
0.03155948092244521]

3)

Input Image:



Output Image:



Discussion:

The flows for the four sides are not what I expected. The reason is that for side locations, the local gradient cannot reflect the flow direction.

The flow directions of the upper-left and lower-right corners are what I expected because

the local gradient reflects the flow direction. However, the magnitudes of the two flows are not the same, which is not what I expected. The reason is that the gradient magnitude is not the same.

The flow of the lower-left and upper-right corners are not what I expected since the calculated f_x and f_y do not have the same sign, making the flow not point to the lower-right.