***WITHOUT FILTER AND NOISE:***

***Image set:***

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| **Image 1** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (17).png*** |
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| **Image 2** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (19).png*** |
| **Image 3** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (21).png*** |
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| **Image 4** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (23).png*** |
| **Image 5** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (25).png*** |
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| **Image 6** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (27).png*** |
| **Image 7** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (29).png*** |
|  |
| **Image 8** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (33).png*** |
| **Image 9** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (31).png*** |
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| **Image 10** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (35).png*** |

**DATA FILES**

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| **Image 1** |
| Original image ideal values:  IM1 image entropy:5.731374e-01  IM1 image mean:0.135802  Ground truth image entropy:0.968631  Ground truth image mean:0.396113  entropy between imt and im1 :0.892367  MSE between imt and im1 :0.358295  Average Difference between imt and im1 :0.260311  Maximum Difference between imt and im1 :1.000000  True Positive values:4382.000000  False Positive values: 2473.000000  True Negative values:28010.000000  False Negative values:15613.000000  Accuracy value: 0.641705  F Measure values:0.326406  Peak Signal-to Noise Ration value: 4.457596  Signal-to Noise Ration value: -4.649139  percentage of pixels that were correctly detected (Pco): 0.219155  The percentage of pixels that were not detected (Pnd):0.780845  the percentage of false alarm: (Pfa):0.123681  Euclidean Distance Value :20.946402 |
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| **Image 2** |
| Original image ideal values:  IM1 image entropy:2.698686e-01  IM1 image mean:0.046163  Ground truth image entropy:0.596365  Ground truth image mean:0.144680  entropy between imt and im1 :0.555439  MSE between imt and im1 :0.160028  Average Difference between imt and im1 :0.098517  Maximum Difference between imt and im1 :1.000000  True Positive values:774.000000  False Positive values: 1545.000000  True Negative values:41422.000000  False Negative values:6494.000000  Accuracy value: 0.839972  F Measure values:0.161469  Peak Signal-to Noise Ration value: 7.958044  Signal-to Noise Ration value: -4.961142  percentage of pixels that were correctly detected (Pco): 0.106494  The percentage of pixels that were not detected (Pnd):0.893506  the percentage of false alarm: (Pfa):0.212576  Euclidean Distance Value :9.746527 |
| **Image 3** |
| Original image ideal values:  IM1 image entropy:4.262027e-01  IM1 image mean:0.086949  Ground truth image entropy:0.717315  Ground truth image mean:0.197705  entropy between imt and im1 :0.656408  MSE between imt and im1 :0.228111  Average Difference between imt and im1 :0.110757  Maximum Difference between imt and im1 :1.000000  True Positive values:1444.000000  False Positive values: 2997.000000  True Negative values:37981.000000  False Negative values:8654.000000  Accuracy value: 0.771889  F Measure values:0.198638  Peak Signal-to Noise Ration value: 6.418537  Signal-to Noise Ration value: -3.567546  percentage of pixels that were correctly detected (Pco): 0.142999  The percentage of pixels that were not detected (Pnd):0.857001  the percentage of false alarm: (Pfa):0.296791  Euclidean Distance Value :13.358303 |
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| **Image 4** |
| Original image ideal values:  IM1 image entropy:6.695941e-01  IM1 image mean:0.175259  Ground truth image entropy:0.943520  Ground truth image mean:0.361012  entropy between imt and im1 :0.874341  MSE between imt and im1 :0.403053  Average Difference between imt and im1 :0.185753  Maximum Difference between imt and im1 :1.000000  True Positive values:17461.000000  False Positive values: 28482.000000  True Negative values:139025.000000  False Negative values:77176.000000  Accuracy value: 0.596947  F Measure values:0.248414  Peak Signal-to Noise Ration value: 3.946375  Signal-to Noise Ration value: -3.138416  percentage of pixels that were correctly detected (Pco): 0.184505  The percentage of pixels that were not detected (Pnd):0.815495  the percentage of false alarm: (Pfa):0.300961  Euclidean Distance Value :17.492116 |
| **Image 5** |
| Original image ideal values:  IM1 image entropy:3.049645e-01  IM1 image mean:0.054440  Ground truth image entropy:0.633825  Ground truth image mean:0.159798  entropy between imt and im1 :0.594063  MSE between imt and im1 :0.182209  Average Difference between imt and im1 :0.105358  Maximum Difference between imt and im1 :1.000000  True Positive values:4198.000000  False Positive values: 10073.000000  True Negative values:210181.000000  False Negative values:37692.000000  Accuracy value: 0.817791  F Measure values:0.149499  Peak Signal-to Noise Ration value: 7.394301  Signal-to Noise Ration value: -4.676560  percentage of pixels that were correctly detected (Pco): 0.100215  The percentage of pixels that were not detected (Pnd):0.899785  the percentage of false alarm: (Pfa):0.240463  Euclidean Distance Value :9.114029 |
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| **Image 6** |
| Original image ideal values:  IM1 image entropy:4.574330e-01  IM1 image mean:0.096386  Ground truth image entropy:0.815119  Ground truth image mean:0.252438  entropy between imt and im1 :0.762482  MSE between imt and im1 :0.286490  Average Difference between imt and im1 :0.156052  Maximum Difference between imt and im1 :1.000000  True Positive values:1566.000000  False Positive values: 3277.000000  True Negative values:34285.000000  False Negative values:11118.000000  Accuracy value: 0.713510  F Measure values:0.178696  Peak Signal-to Noise Ration value: 5.428898  Signal-to Noise Ration value: -4.181418  percentage of pixels that were correctly detected (Pco): 0.123463  The percentage of pixels that were not detected (Pnd):0.876537  the percentage of false alarm: (Pfa):0.258357  Euclidean Distance Value :11.416996 |
| **Image 7** |
| Original image ideal values:  IM1 image entropy:6.200144e-01  IM1 image mean:0.154103  Ground truth image entropy:0.746959  Ground truth image mean:0.212884  entropy between imt and im1 :0.652909  MSE between imt and im1 :0.277046  Average Difference between imt and im1 :0.058780  Maximum Difference between imt and im1 :1.000000  True Positive values:2273.000000  False Positive values: 5516.000000  True Negative values:34268.000000  False Negative values:8487.000000  Accuracy value: 0.722954  F Measure values:0.245081  Peak Signal-to Noise Ration value: 5.574485  Signal-to Noise Ration value: -1.403306  percentage of pixels that were correctly detected (Pco): 0.211245  The percentage of pixels that were not detected (Pnd):0.788755  the percentage of false alarm: (Pfa):0.512639  Euclidean Distance Value :20.170377 |
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| **Image 8** |
| Original image ideal values:  IM1 image entropy:5.030037e-01  IM1 image mean:0.111026  Ground truth image entropy:0.938608  Ground truth image mean:0.644822  entropy between imt and im1 :0.993744  MSE between imt and im1 :0.559261  Average Difference between imt and im1 :0.533796  Maximum Difference between imt and im1 :1.000000  True Positive values:6307.000000  False Positive values: 817.000000  True Negative values:21973.000000  False Negative values:35068.000000  Accuracy value: 0.440739  F Measure values:0.260088  Peak Signal-to Noise Ration value: 2.523852  Signal-to Noise Ration value: -7.640141  percentage of pixels that were correctly detected (Pco): 0.152435  The percentage of pixels that were not detected (Pnd):0.847565  the percentage of false alarm: (Pfa):0.019746  Euclidean Distance Value :14.294020 |
| **Image 9** |
| Original image ideal values:  IM1 image entropy:3.383517e-01  IM1 image mean:0.062772  Ground truth image entropy:0.999293  Ground truth image mean:0.484350  entropy between imt and im1 :0.991059  MSE between imt and im1 :0.467204  Average Difference between imt and im1 :0.421578  Maximum Difference between imt and im1 :1.000000  True Positive values:4463.000000  False Positive values: 2548.000000  True Negative values:55045.000000  False Negative values:49634.000000  Accuracy value: 0.532796  F Measure values:0.146069  Peak Signal-to Noise Ration value: 3.304936  Signal-to Noise Ration value: -8.873932  percentage of pixels that were correctly detected (Pco): 0.082500  The percentage of pixels that were not detected (Pnd):0.917500  the percentage of false alarm: (Pfa):0.047101  Euclidean Distance Value :7.365508 |
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| **Image 10** |
| Original image ideal values:  IM1 image entropy:5.940245e-01  IM1 image mean:0.143769  Ground truth image entropy:0.979516  Ground truth image mean:0.415943  entropy between imt and im1 :0.908383  MSE between imt and im1 :0.375269  Average Difference between imt and im1 :0.272174  Maximum Difference between imt and im1 :1.000000  True Positive values:4292.000000  False Positive values: 2399.000000  True Negative values:24783.000000  False Negative values:15066.000000  Accuracy value: 0.624731  F Measure values:0.329533  Peak Signal-to Noise Ration value: 4.256578  Signal-to Noise Ration value: -4.613695  percentage of pixels that were correctly detected (Pco): 0.221717  The percentage of pixels that were not detected (Pnd):0.778283  the percentage of false alarm: (Pfa):0.123928  Euclidean Distance Value :21.204350 |