**WITHOUT NOISE AND WITH FILTER**

**Image set:**

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| **Image 1** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (36).png*** |
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| **Image 2** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (38).png*** |
| **Image 3** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (40).png*** |
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| **Image 4** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (42).png*** |
| **Image 5** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (44).png*** |
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| **Image 6** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (46).png*** |
| **Image 7** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (48).png*** |
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| **Image 8** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (50).png*** |
| **Image 9** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (52).png*** |
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| **Image 10** |
| ***C:\Users\ABC\OneDrive\Pictures\Screenshots\Screenshot (54).png*** |

**DATA FILES**

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| **Image 1** |
| Original image ideal values:  IM1 image entropy:5.756180e-01  IM1 image mean:0.136733  Ground truth image entropy:0.968631  Ground truth image mean:0.396113  entropy between imt and im1 :0.900836  MSE between imt and im1 :0.374163  Average Difference between imt and im1 :0.259380  Maximum Difference between imt and im1 :1.000000  True Positive values:4005.000000  False Positive values: 2897.000000  True Negative values:27586.000000  False Negative values:15990.000000  Accuracy value: 0.625837  F Measure values:0.297803  Peak Signal-to Noise Ration value: 4.269392  Signal-to Noise Ration value: -4.619465  percentage of pixels that were correctly detected (Pco): 0.200300  The percentage of pixels that were not detected (Pnd):0.799700  the percentage of false alarm: (Pfa):0.144886  Euclidean Distance Value :19.065561 |
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| **Image 2** |
| Original image ideal values:  IM1 image entropy:2.174255e-01  IM1 image mean:0.034697  Ground truth image entropy:0.596365  Ground truth image mean:0.144680  entropy between imt and im1 :0.563816  MSE between imt and im1 :0.154693  Average Difference between imt and im1 :0.109983  Maximum Difference between imt and im1 :1.000000  True Positive values:620.000000  False Positive values: 1123.000000  True Negative values:41844.000000  False Negative values:6648.000000  Accuracy value: 0.845307  F Measure values:0.137610  Peak Signal-to Noise Ration value: 8.105295  Signal-to Noise Ration value: -6.201175  percentage of pixels that were correctly detected (Pco): 0.085305  The percentage of pixels that were not detected (Pnd):0.914695  the percentage of false alarm: (Pfa):0.154513  Euclidean Distance Value :7.652086 |
| **Image 3** |
| Original image ideal values:    IM1 image entropy:3.341267e-01  IM1 image mean:0.061692  Ground truth image entropy:0.717315  Ground truth image mean:0.197705  entropy between imt and im1 :0.671144  MSE between imt and im1 :0.215894  Average Difference between imt and im1 :0.136013  Maximum Difference between imt and im1 :1.000000  True Positive values:1111.000000  False Positive values: 2040.000000  True Negative values:38938.000000  False Negative values:8987.000000  Accuracy value: 0.784106  F Measure values:0.167711  Peak Signal-to Noise Ration value: 6.657595  Signal-to Noise Ration value: -5.057870  percentage of pixels that were correctly detected (Pco): 0.110022  The percentage of pixels that were not detected (Pnd):0.889978  the percentage of false alarm: (Pfa):0.202020  Euclidean Distance Value :10.083117 |
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| **Image 4** |
| Original image ideal values:  IM1 image entropy:4.314079e-01  IM1 image mean:0.088490  Ground truth image entropy:0.943520  Ground truth image mean:0.361012  entropy between imt and im1 :0.909036  MSE between imt and im1 :0.376152  Average Difference between imt and im1 :0.272522  Maximum Difference between imt and im1 :1.000000  True Positive values:9614.000000  False Positive values: 13583.000000  True Negative values:153924.000000  False Negative values:85023.000000  Accuracy value: 0.623848  F Measure values:0.163179  Peak Signal-to Noise Ration value: 4.246366  Signal-to Noise Ration value: -6.106291  percentage of pixels that were correctly detected (Pco): 0.101588  The percentage of pixels that were not detected (Pnd):0.898412  the percentage of false alarm: (Pfa):0.143527  Euclidean Distance Value :9.248590 |
| **Image 5** |
| Original image ideal values:    IM1 image entropy:2.788923e-01  IM1 image mean:0.048244  Ground truth image entropy:0.633825  Ground truth image mean:0.159798  entropy between imt and im1 :0.592558  MSE between imt and im1 :0.174847  Average Difference between imt and im1 :0.111553  Maximum Difference between imt and im1 :1.000000  True Positive values:4351.000000  False Positive values: 8296.000000  True Negative values:211958.000000  False Negative values:37539.000000  Accuracy value: 0.825153  F Measure values:0.159561  Peak Signal-to Noise Ration value: 7.573427  Signal-to Noise Ration value: -5.201228  percentage of pixels that were correctly detected (Pco): 0.103867  The percentage of pixels that were not detected (Pnd):0.896133  the percentage of false alarm: (Pfa):0.198042  Euclidean Distance Value :9.474064 |
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| **Image 6** |
| Original image ideal values:  IM1 image entropy:4.257412e-01  IM1 image mean:0.086813  Ground truth image entropy:0.815119  Ground truth image mean:0.252438  entropy between imt and im1 :0.769145  MSE between imt and im1 :0.284321  Average Difference between imt and im1 :0.165625  Maximum Difference between imt and im1 :1.000000  True Positive values:1380.000000  False Positive values: 2982.000000  True Negative values:34580.000000  False Negative values:11304.000000  Accuracy value: 0.715679  F Measure values:0.161915  Peak Signal-to Noise Ration value: 5.461908  Signal-to Noise Ration value: -4.635706  percentage of pixels that were correctly detected (Pco): 0.108798  The percentage of pixels that were not detected (Pnd):0.891202  the percentage of false alarm: (Pfa):0.235099  Euclidean Distance Value :9.962982 |
| **Image 7** |
| Original image ideal values:    IM1 image entropy:4.386480e-01  IM1 image mean:0.090654  Ground truth image entropy:0.746959  Ground truth image mean:0.212884  entropy between imt and im1 :0.682455  MSE between imt and im1 :0.239949  Average Difference between imt and im1 :0.122230  Maximum Difference between imt and im1 :1.000000  True Positive values:1607.000000  False Positive values: 2975.000000  True Negative values:36809.000000  False Negative values:9153.000000  Accuracy value: 0.760051  F Measure values:0.209490  Peak Signal-to Noise Ration value: 6.198804  Signal-to Noise Ration value: -3.707572  percentage of pixels that were correctly detected (Pco): 0.149349  The percentage of pixels that were not detected (Pnd):0.850651  the percentage of false alarm: (Pfa):0.276487  Euclidean Distance Value :13.997924 |
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| **Image 8** |
| Original image ideal values:  IM1 image entropy:5.035180e-01  IM1 image mean:0.111198  Ground truth image entropy:0.938608  Ground truth image mean:0.644822  entropy between imt and im1 :0.993647  MSE between imt and im1 :0.560150  Average Difference between imt and im1 :0.533624  Maximum Difference between imt and im1 :1.000000  True Positive values:6284.000000  False Positive values: 851.000000  True Negative values:21939.000000  False Negative values:35091.000000  Accuracy value: 0.439850  F Measure values:0.259081  Peak Signal-to Noise Ration value: 2.516960  Signal-to Noise Ration value: -7.633440  percentage of pixels that were correctly detected (Pco): 0.151879  The percentage of pixels that were not detected (Pnd):0.848121  the percentage of false alarm: (Pfa):0.020568  Euclidean Distance Value :14.238695 |
| **Image 9** |
| Original image ideal values:  IM1 image entropy:3.321398e-01  IM1 image mean:0.061187  Ground truth image entropy:0.999293  Ground truth image mean:0.484350  entropy between imt and im1 :0.990573  MSE between imt and im1 :0.462647  Average Difference between imt and im1 :0.423162  Maximum Difference between imt and im1 :1.000000  True Positive values:4629.000000  False Positive values: 2205.000000  True Negative values:55388.000000  False Negative values:49468.000000  Accuracy value: 0.537353  F Measure values:0.151942  Peak Signal-to Noise Ration value: 3.347506  Signal-to Noise Ration value: -8.984982  percentage of pixels that were correctly detected (Pco): 0.085569  The percentage of pixels that were not detected (Pnd):0.914431  the percentage of false alarm: (Pfa):0.040760  Euclidean Distance Value :7.666980 |
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| **Image 10**  Original image ideal values:  IM1 image entropy:5.966733e-01  IM1 image mean:0.144800  Ground truth image entropy:0.979516  Ground truth image mean:0.415943  entropy between imt and im1 :0.916777  MSE between imt and im1 :0.392501  Average Difference between imt and im1 :0.271143  Maximum Difference between imt and im1 :1.000000  True Positive values:3915.000000  False Positive values: 2824.000000  True Negative values:24358.000000  False Negative values:15443.000000  Accuracy value: 0.607499  F Measure values:0.300034  Peak Signal-to Noise Ration value: 4.061592  Signal-to Noise Ration value: -4.582650  percentage of pixels that were correctly detected (Pco): 0.202242  The percentage of pixels that were not detected (Pnd):0.797758  the percentage of false alarm: (Pfa):0.145883  Euclidean Distance Value :19.261509 |