**Results:**

**1.GLCM (Grey Level Occurrence Matrix)**

GLCM parameters:

Distance   = [1,2,3]

           Angles =   [0, np.pi/4, np.pi/2, (np.pi\*3)/4]

Properties = ['energy', 'homogeneity', 'contrast', 'dissimilarity', 'correlation', 'ASM']

           Using mean over the angles. End up with 18 parameters

SVM parameters: C=100, Kernel='rbf', Gamma='scale'

Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | 0 (True Normal) | 1 (True Pneumonia) |
| 0 (False Normal) | 118 | 32 |
| 1 (False Pneumonia) | 116 | 358 |

Accuracy :  76.28  %

Precision :  75.53 %

Recall       :  91.80 %

**2. HOG: (Histogram of oriented gradients )**

HOG parameters:

729 features

Hog(image,pixels\_per\_cell=(50,50), cells\_per\_block=(3,3))

SVC(C=10, kernel='rbf', gamma=0.001)

Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | 0 (True Normal) | 1 (True Pneumonia) |
| 0 (False Normal) | 134 | 6 |
| 1 (False Pneumonia) | 100 | 384 |

Accuracy :  83.01  %

Precision :  79.33 %

Recall       : 98.46 %

**3.LBP(Local binary Pattern):**

LBP parameters

Radius = 3

n\_points = 24

METHOD = 'uniform'

(C=10, kernel='rbf', gamma=0.01)

Confusion Matrix:

|  |  |  |
| --- | --- | --- |
|  | 0 (True Normal) | 1 (True Pneumonia) |
| 0 (False Normal) | 133 | 19 |
| 1 (False Pneumonia) | 101 | 371 |

Accuracy :  80.77  %

Precision :  78.60 %

Recall       : 95.13%

