

Modality 1 - Thermal  
Non Falls - 48, Falls - 173

Modality 2 - ONI\_IR  
Non Falls - 48, Falls - 173

Train Dataloader - 48  
Test Dataloader - 173

Device Used - cuda

Model Used - MultiModal\_3DCAE  
Key Frame Extraction - False  
Feature Extraction - True  
Background Subtraction - True  
Background Subtraction Algorithm - GMG  
Data Augmentation - False  
Spatial Temporal Loss - False

Frame rate adjusted dataset - True  
Synchronise Video - True  
Video length adjustment method - Not Applicable

Window Length = 8  
Stride = 1  
Fair Comparison = True  
Dropout = 0.25  
Learning Rate = 0.0002  
Num Epochs = 20  
Chunk Size = 64  
Forward Chunk Size = 8  
Loss Fn = HuberLoss()

Training has Begun  
epoch [1/20], loss:0.0001  
epoch [2/20], loss:0.0000  
epoch [3/20], loss:0.0000  
epoch [4/20], loss:0.0000  
epoch [5/20], loss:0.0000  
epoch [6/20], loss:0.0000  
epoch [7/20], loss:0.0000  
epoch [8/20], loss:0.0000  
epoch [9/20], loss:0.0000  
epoch [10/20], loss:0.0000  
epoch [11/20], loss:0.0000  
epoch [12/20], loss:0.0000  
epoch [13/20], loss:0.0000  
epoch [14/20], loss:0.0000  
epoch [15/20], loss:0.0000  
epoch [16/20], loss:0.0000  
epoch [17/20], loss:0.0000  
epoch [18/20], loss:0.0000  
epoch [19/20], loss:0.0000  
epoch [20/20], loss:0.0000  
Training has Completed

Forward pass occurring  
Forward pass completed

```
-----  
STD Global Classification Results  
TPR 0.894, FPR 0.217, Precision 0.053, Recall 0.894  
tn 102631, fp 28491, fn 191, tp 1605  
std_AUROC 0.913  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.865, FPR 0.185, Precision 0.060, Recall 0.865  
tn 106882, fp 24240, fn 242, tp 1554  
mean_AUROC 0.917  
-----
```

```
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\func  
tions.py:250: RuntimeWarning: Mean of empty slice  
    final_performance_mean = np.nanmean(video_metrics, axis=0) # get the mean performance a  
cross all videos  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\nanfunctions.p  
y:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.  
    var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,
```

```
-----  
STD Global Classification Results  
TPR 0.898, FPR 0.172, Precision 0.067, Recall 0.898  
tn 108567, fp 22555, fn 184, tp 1612  
std_AUROC 0.919  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.932, FPR 0.213, Precision 0.056, Recall 0.932  
tn 103167, fp 27955, fn 123, tp 1673  
mean_AUROC 0.904  
-----
```

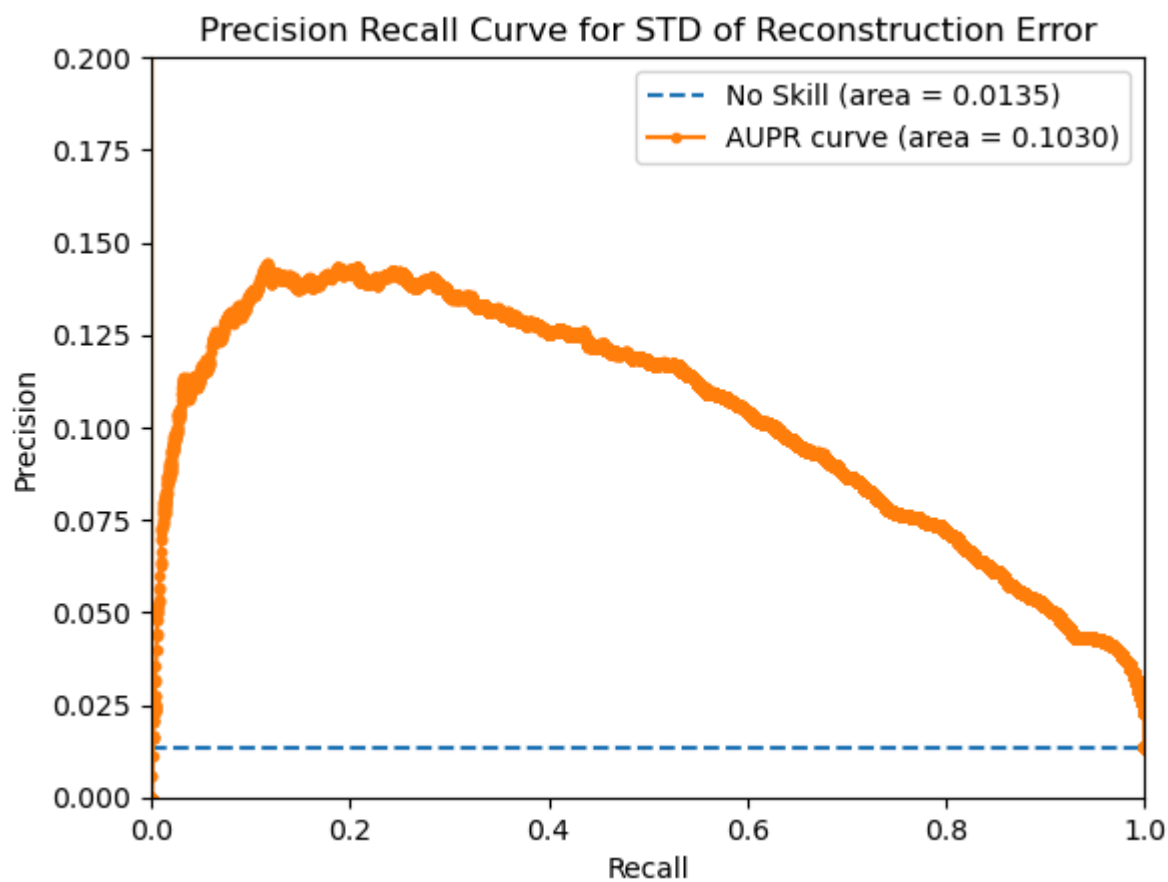
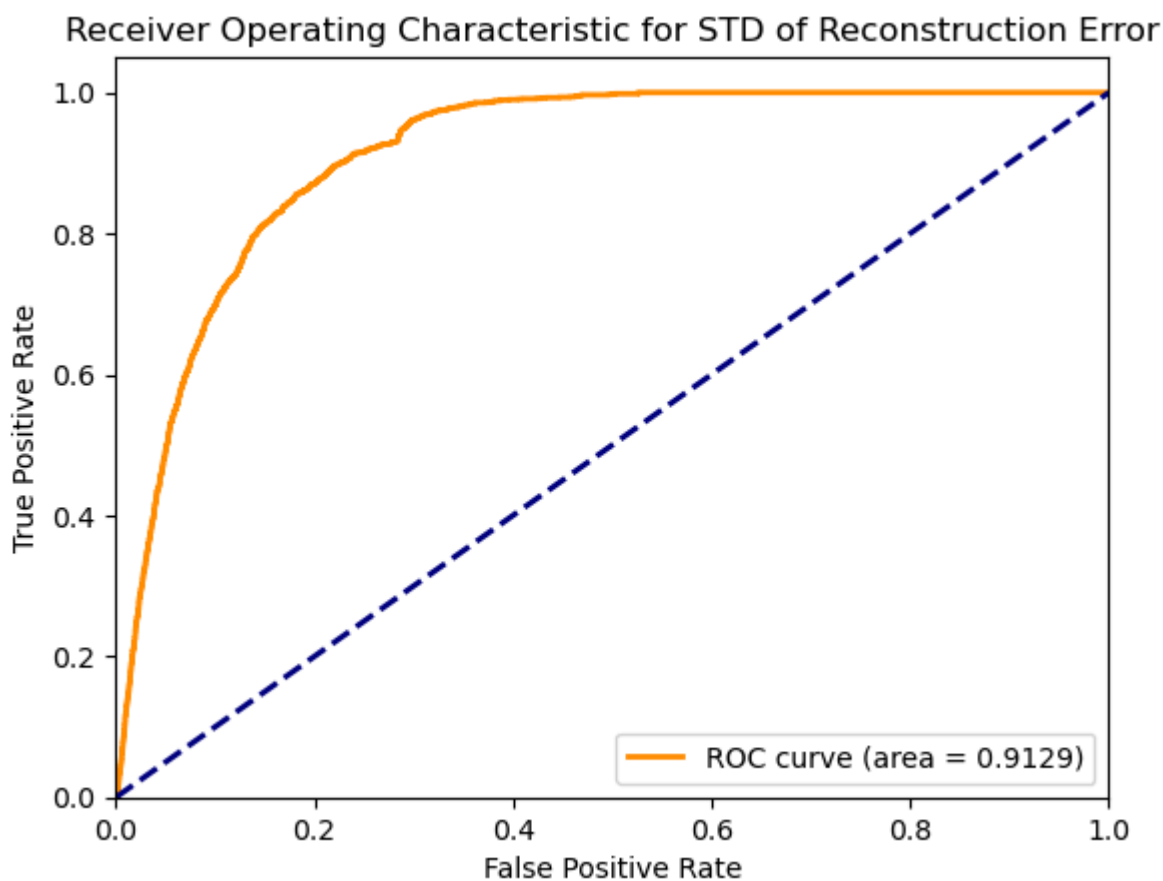
```
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\func  
tions.py:250: RuntimeWarning: Mean of empty slice  
    final_performance_mean = np.nanmean(video_metrics, axis=0) # get the mean performance a  
cross all videos  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\nanfunctions.p  
y:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.  
    var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,
```

```
-----  
STD Global Classification Results  
TPR 0.916, FPR 0.212, Precision 0.056, Recall 0.916  
tn 103383, fp 27739, fn 150, tp 1646  
std_AUROC 0.926  
-----
```

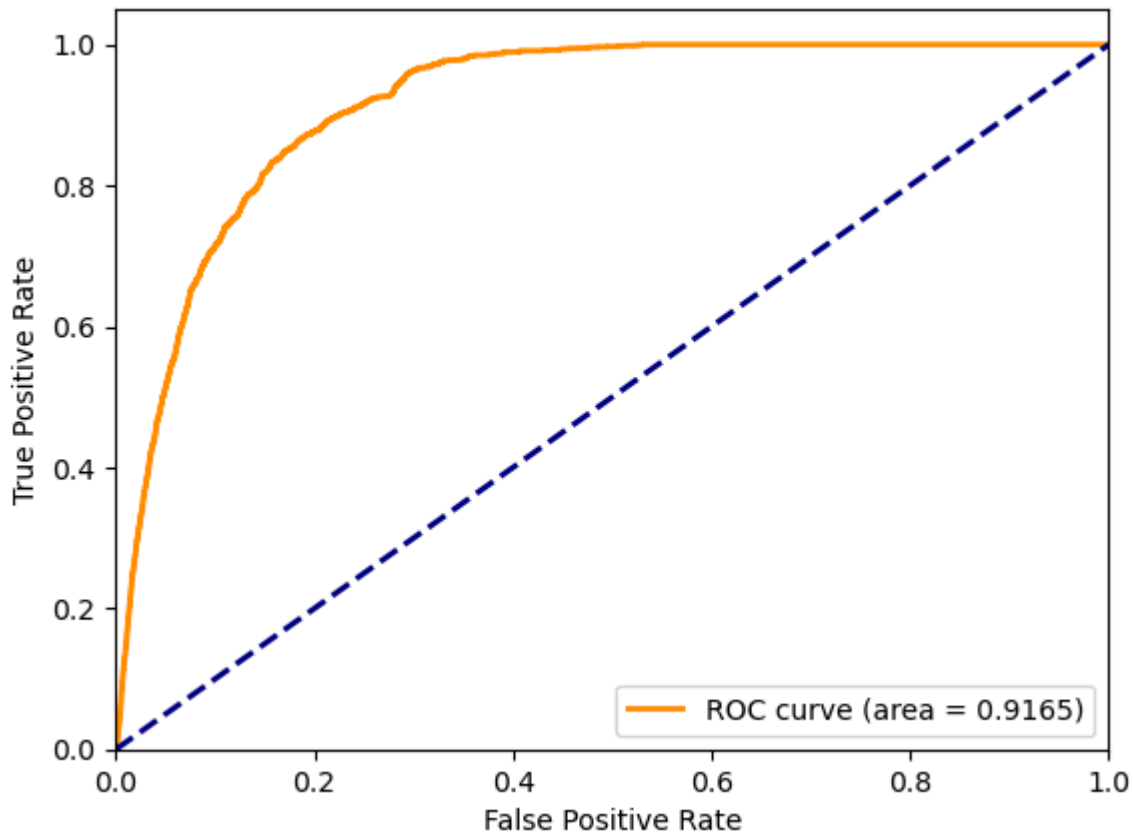
```
-----  
Mean Global Classification Results  
TPR 0.896, FPR 0.200, Precision 0.058, Recall 0.896  
tn 104908, fp 26214, fn 186, tp 1610  
mean_AUROC 0.919  
-----
```

```
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\func  
tions.py:250: RuntimeWarning: Mean of empty slice  
    final_performance_mean = np.nanmean(video_metrics, axis=0) # get the mean performance a  
cross all videos  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\nanfunctions.p  
y:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.  
    var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,
```

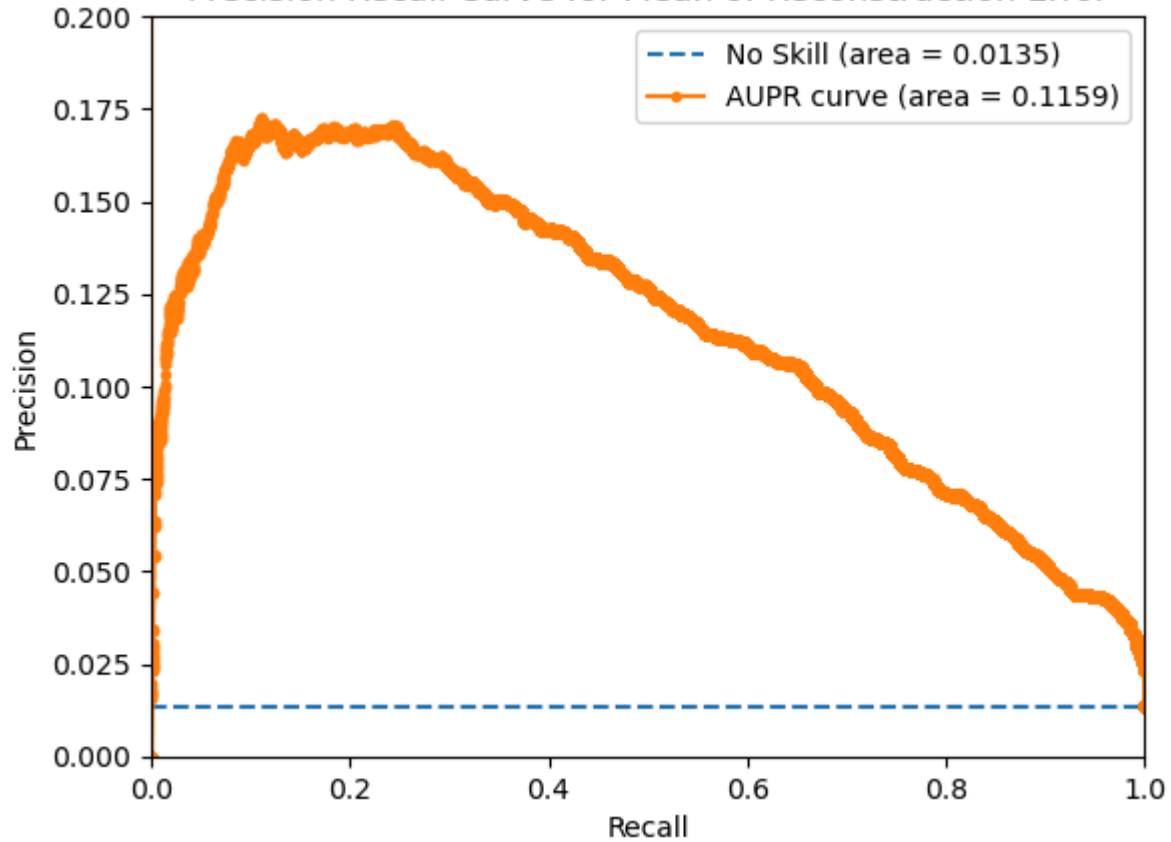
(c)



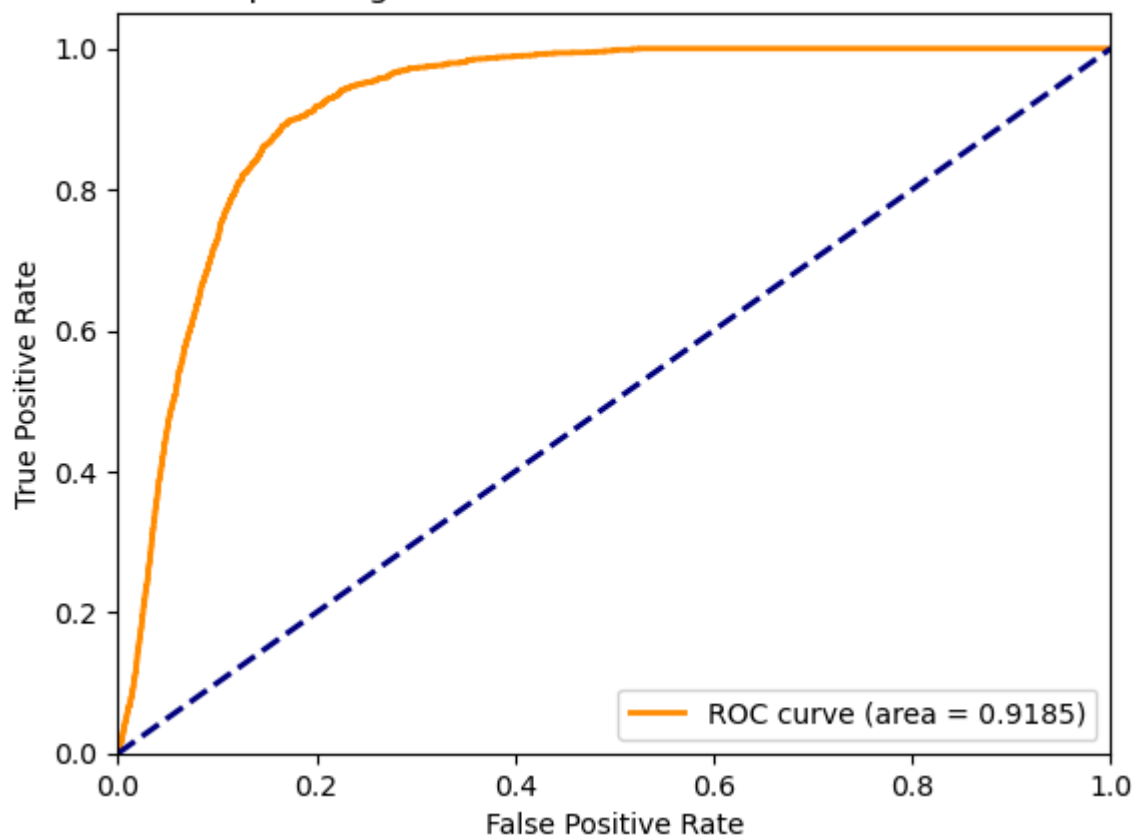
Receiver Operating Characteristic for Mean of Reconstruction Error



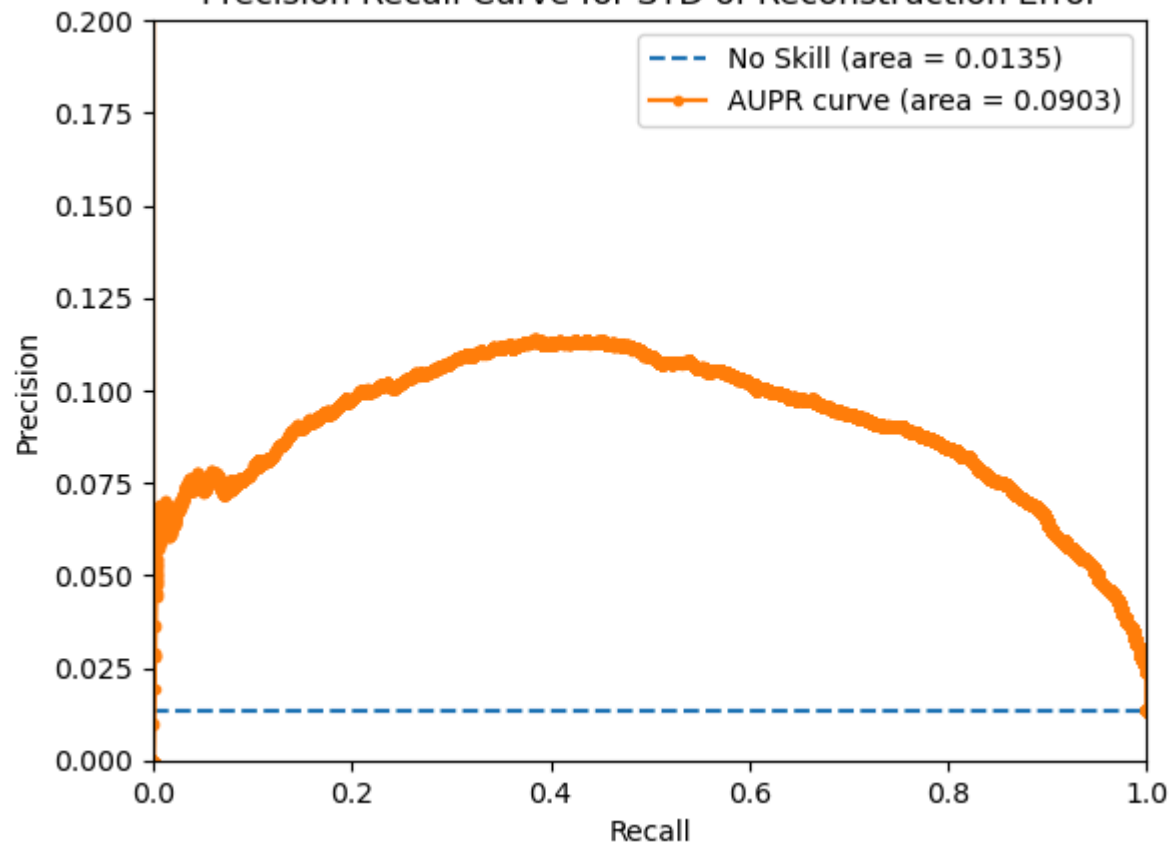
Precision Recall Curve for Mean of Reconstruction Error



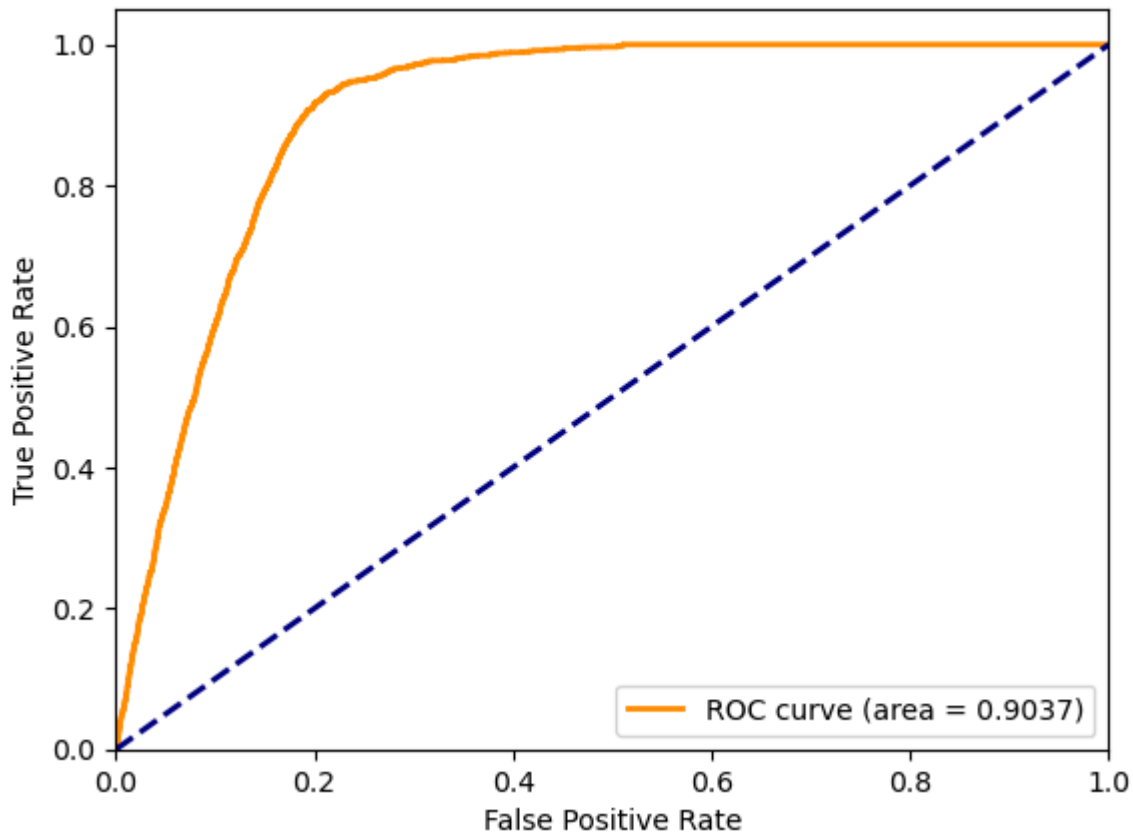
Receiver Operating Characteristic for STD of Reconstruction Error



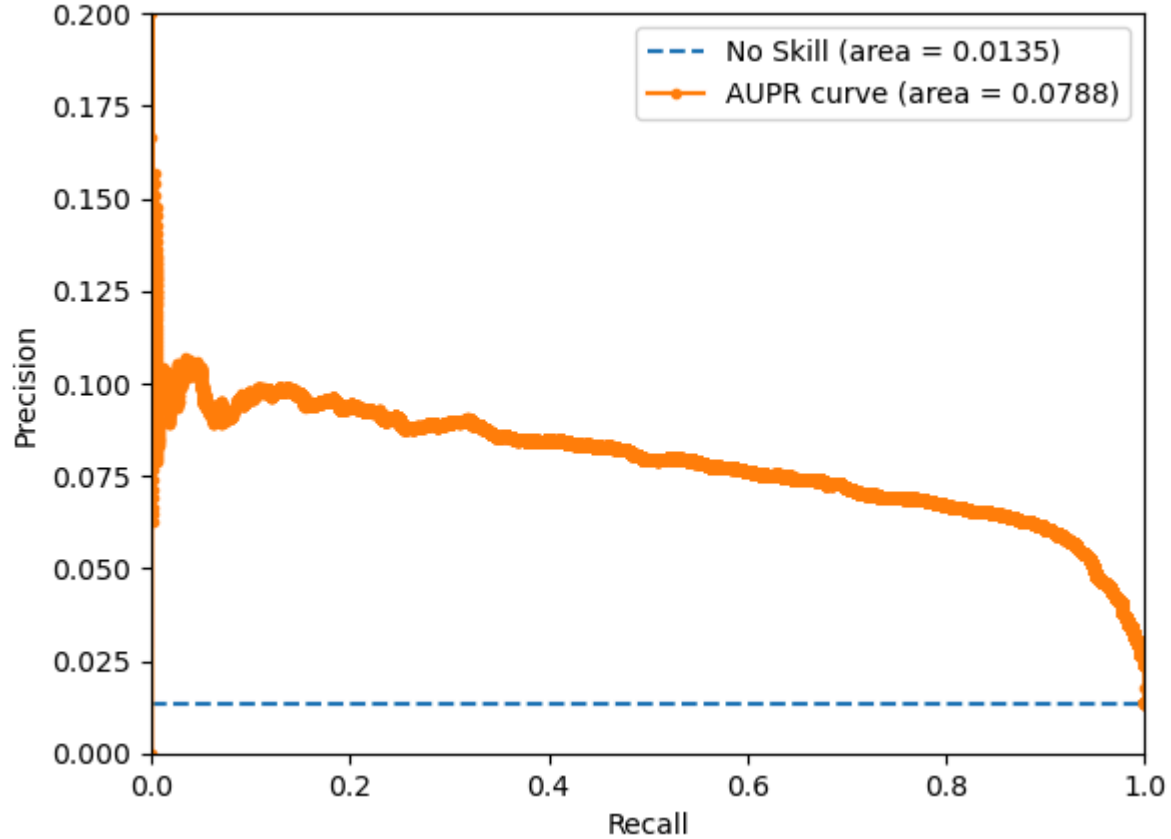
Precision Recall Curve for STD of Reconstruction Error



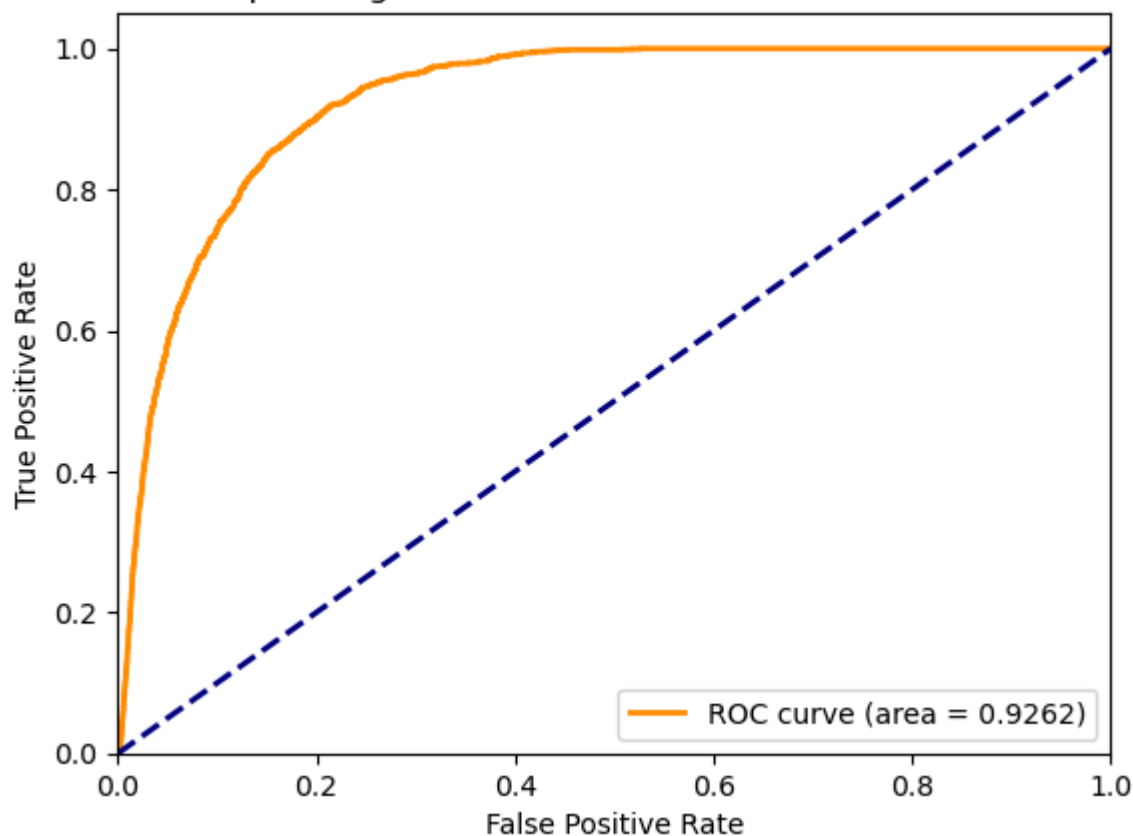
Receiver Operating Characteristic for Mean of Reconstruction Error



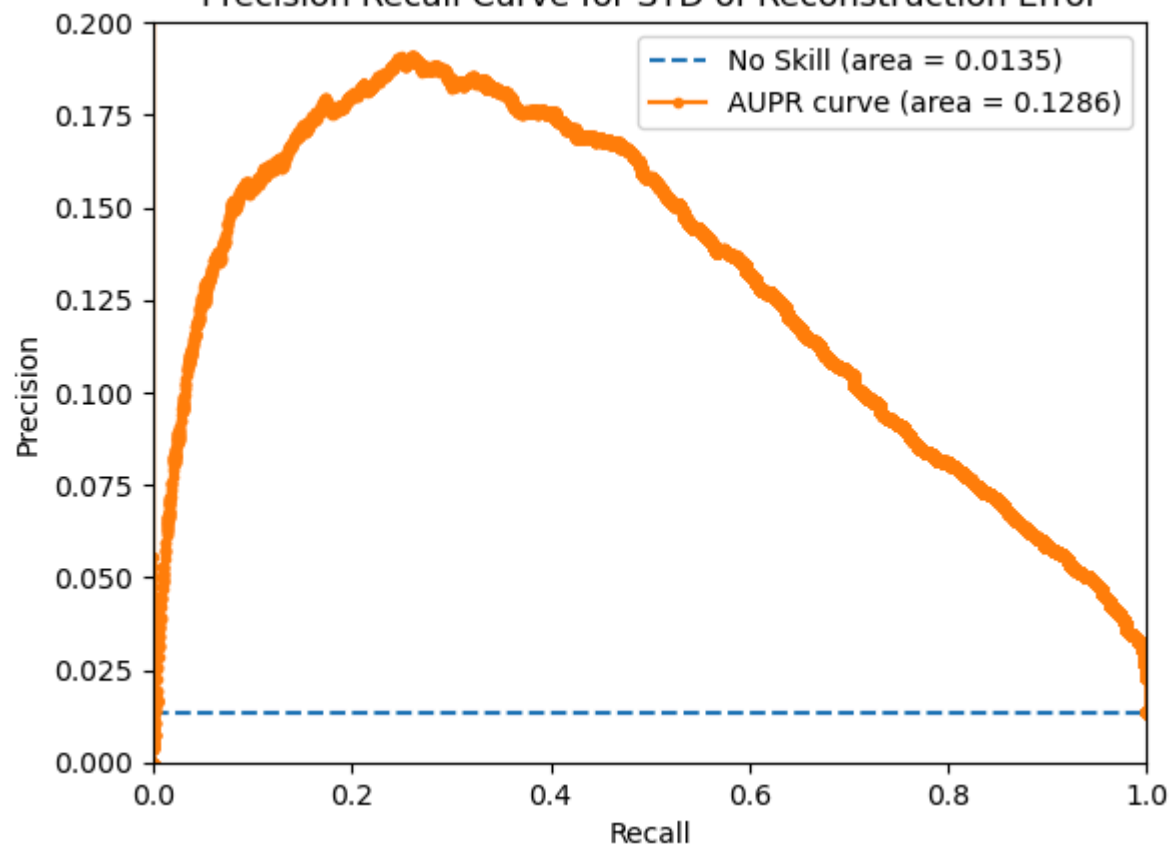
Precision Recall Curve for Mean of Reconstruction Error



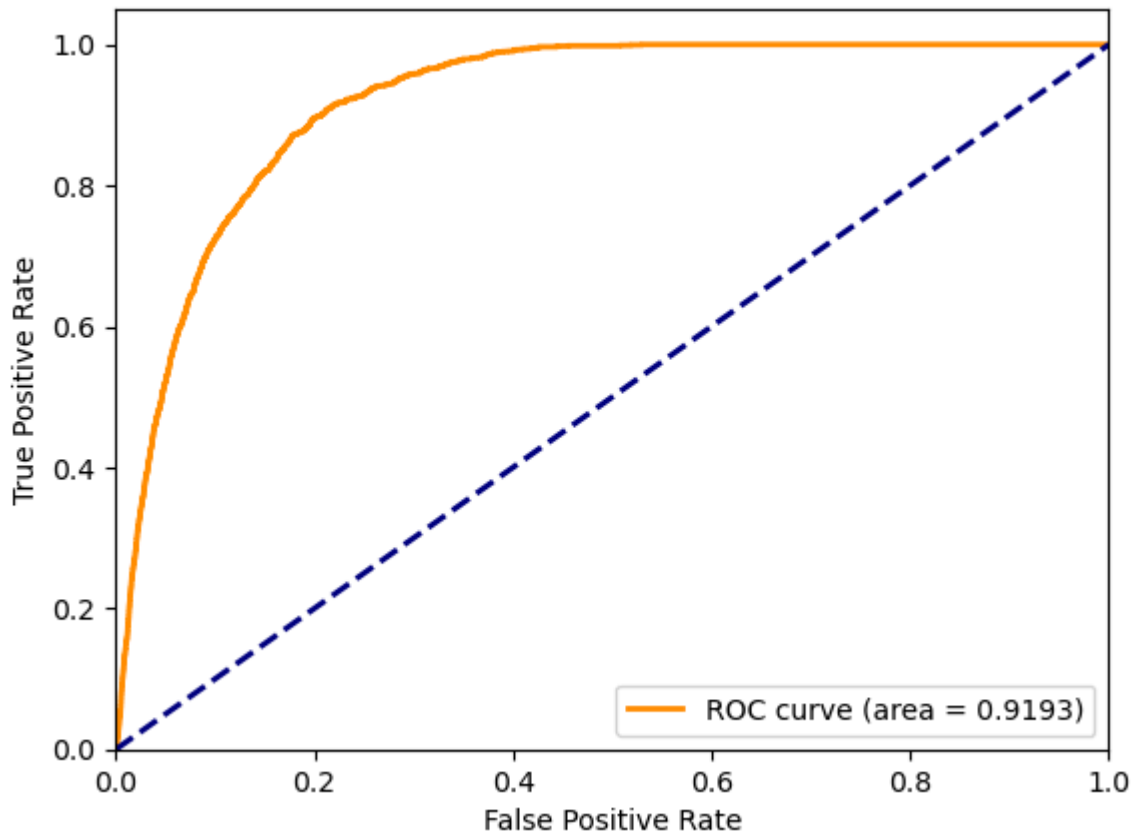
Receiver Operating Characteristic for STD of Reconstruction Error



Precision Recall Curve for STD of Reconstruction Error



Receiver Operating Characteristic for Mean of Reconstruction Error



Precision Recall Curve for Mean of Reconstruction Error

