

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 = MSELoss()

Training has Begun
epoch [1/20], loss:0.0013
epoch [2/20], loss:0.0002
epoch [3/20], loss:0.0001
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 102659, fp 28463, fn 191, tp 1605  
std_AUROC 0.913  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.915, FPR 0.239, Precision 0.050, Recall 0.915  
tn 99736, fp 31386, fn 152, tp 1644  
mean_AUROC 0.889  
-----
```

```
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 108553, fp 22569, fn 184, tp 1612  
std_AUROC 0.918  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.955, FPR 0.279, Precision 0.045, Recall 0.955  
tn 94538, fp 36584, fn 81, tp 1715  
mean_AUROC 0.866  
-----
```

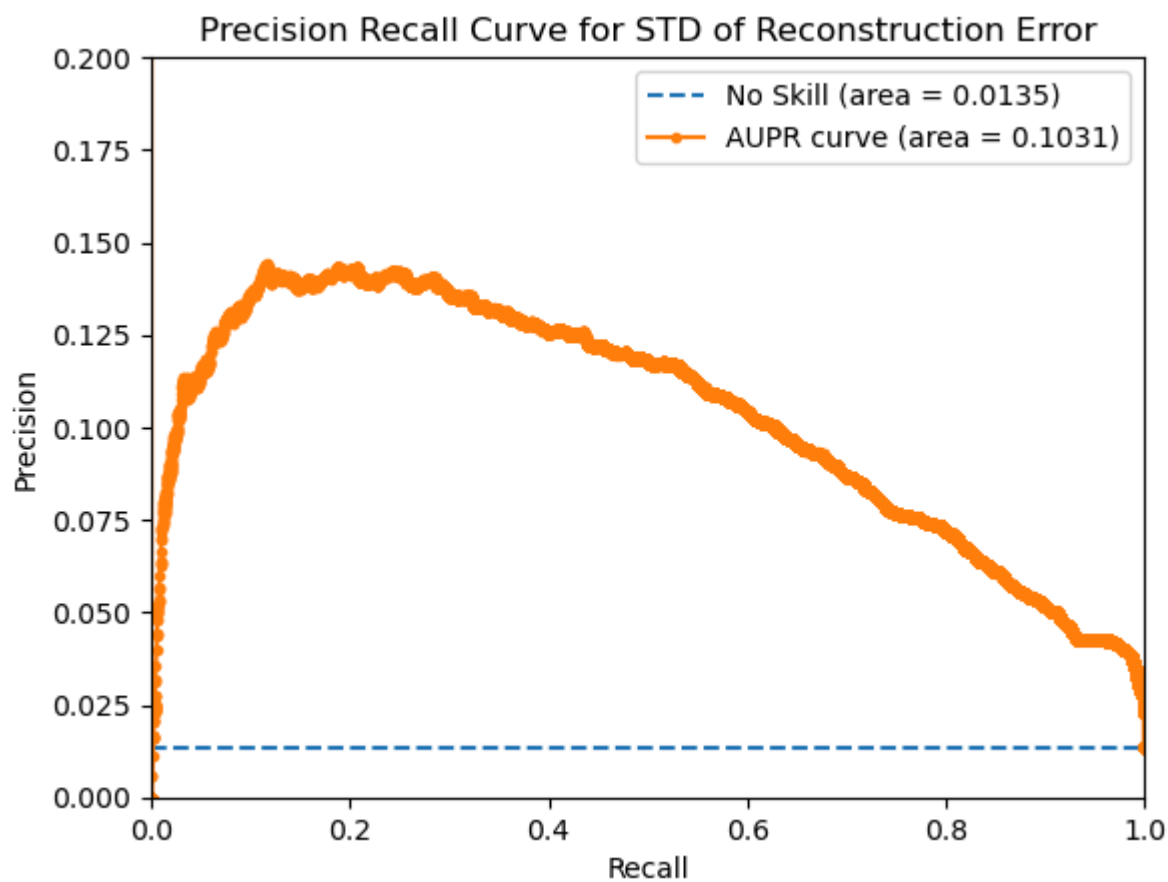
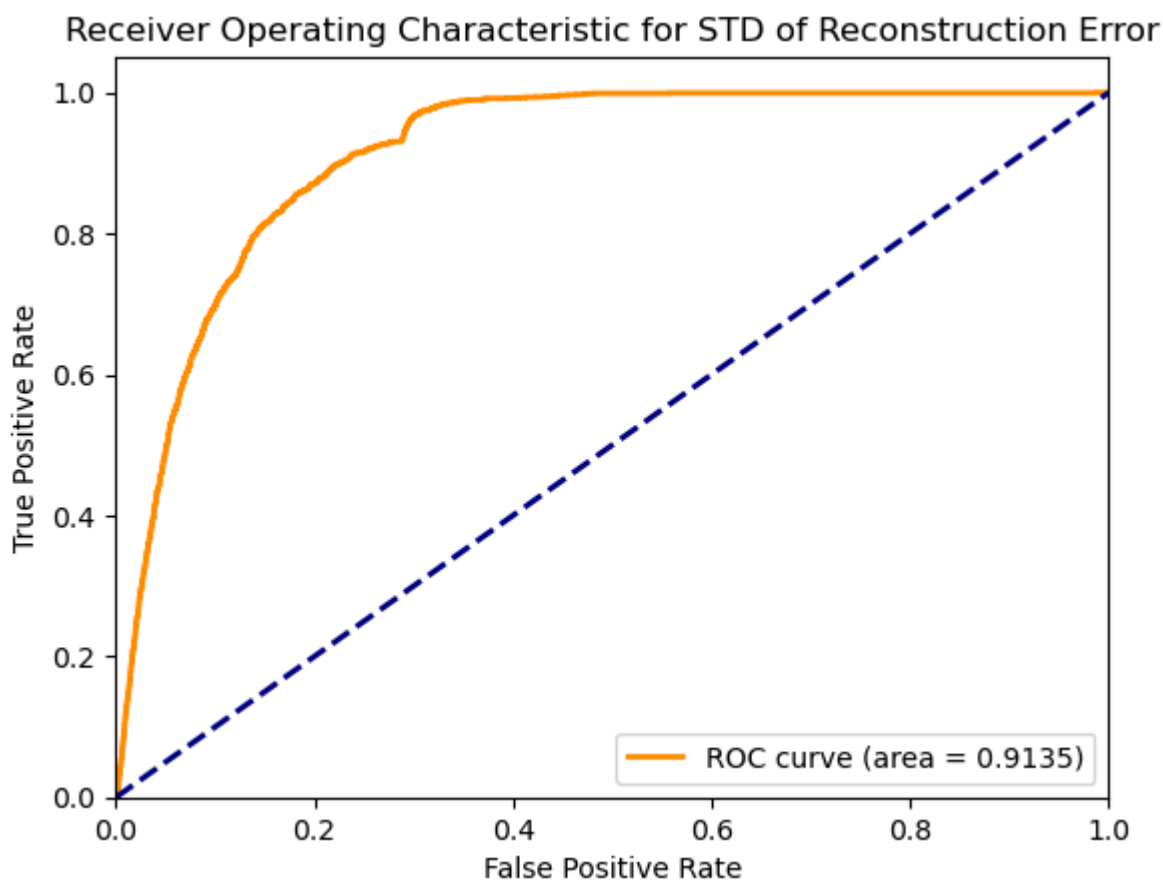
```
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\func  
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y:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.  
    var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,
```

```
-----  
STD Global Classification Results  
TPR 0.919, FPR 0.214, Precision 0.056, Recall 0.919  
tn 103026, fp 28096, fn 145, tp 1651  
std_AUROC 0.926  
-----
```

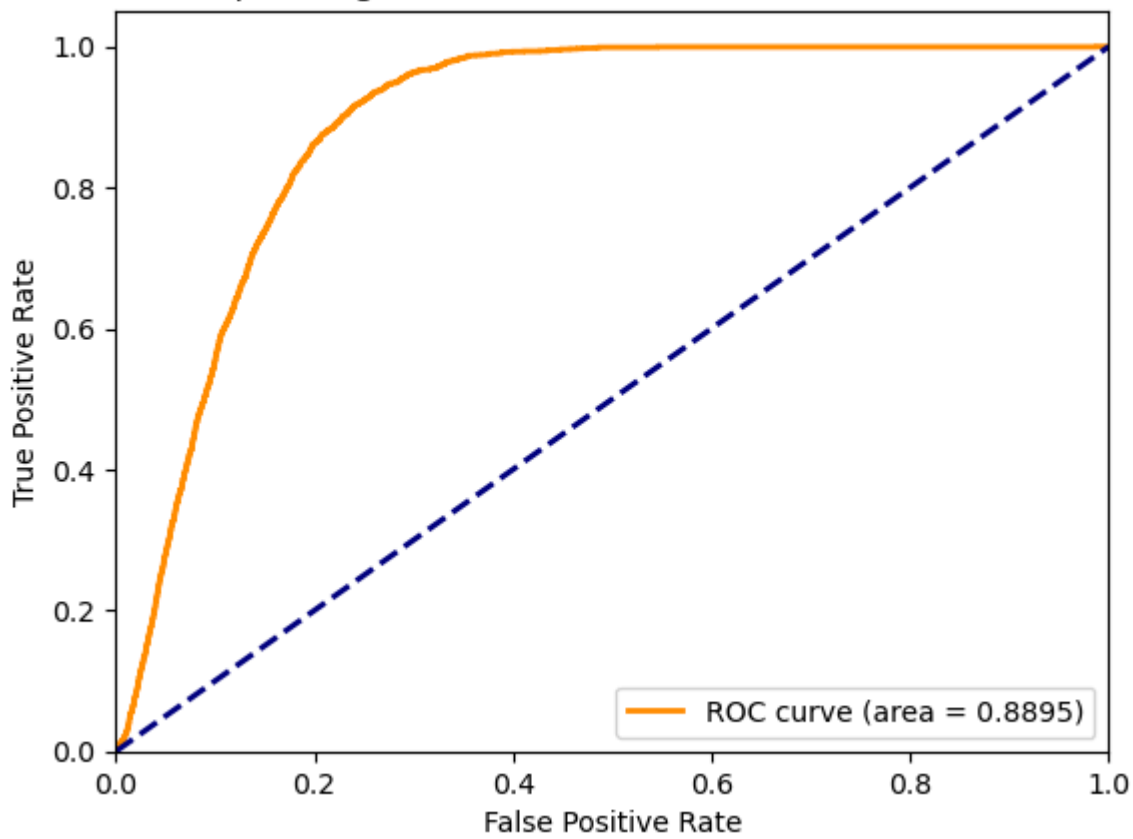
```
-----  
Mean Global Classification Results  
TPR 0.910, FPR 0.260, Precision 0.046, Recall 0.910  
tn 97086, fp 34036, fn 161, tp 1635  
mean_AUROC 0.879  
-----
```

```
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,
```

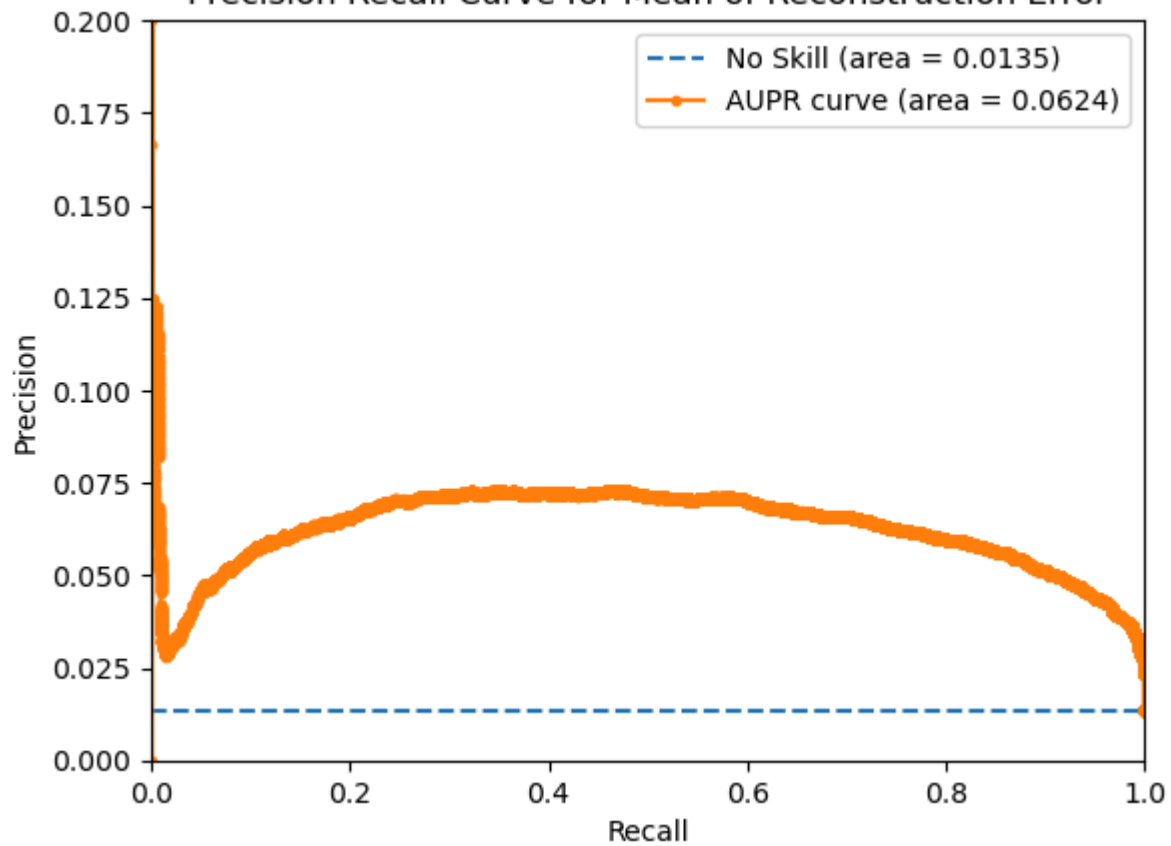
(c)



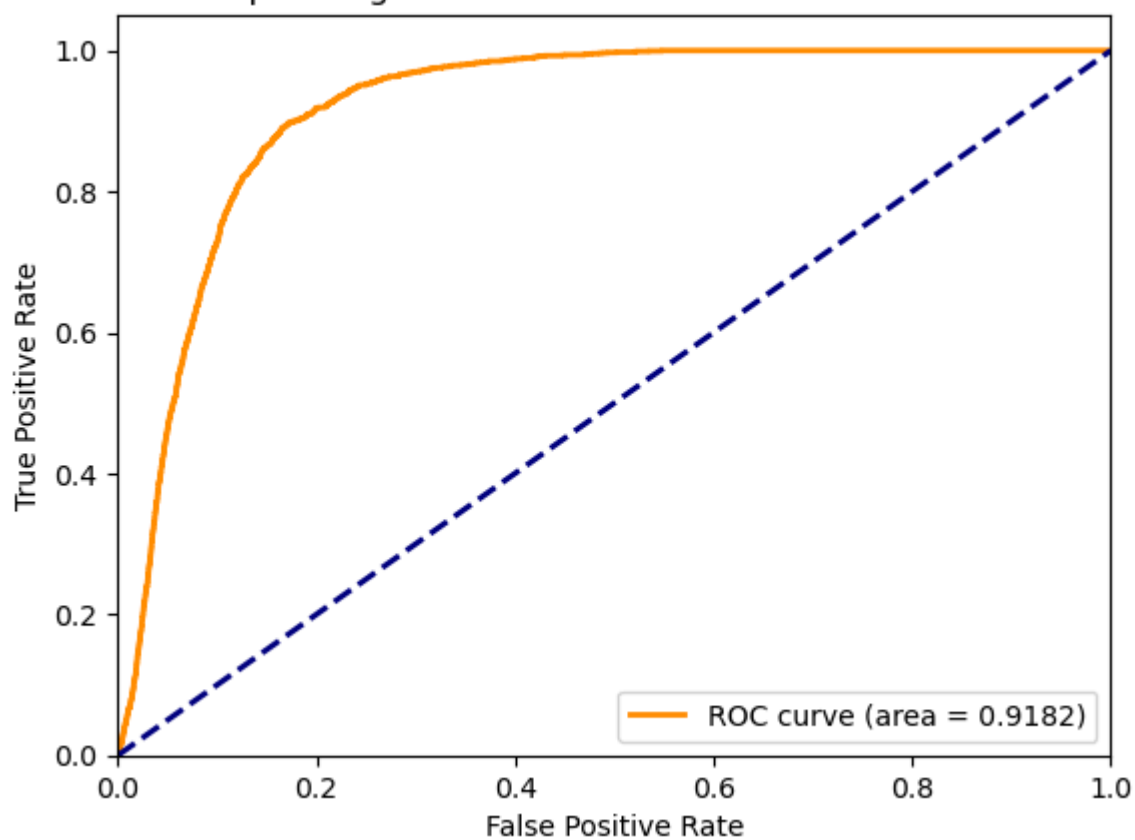
Receiver Operating Characteristic for Mean of Reconstruction Error



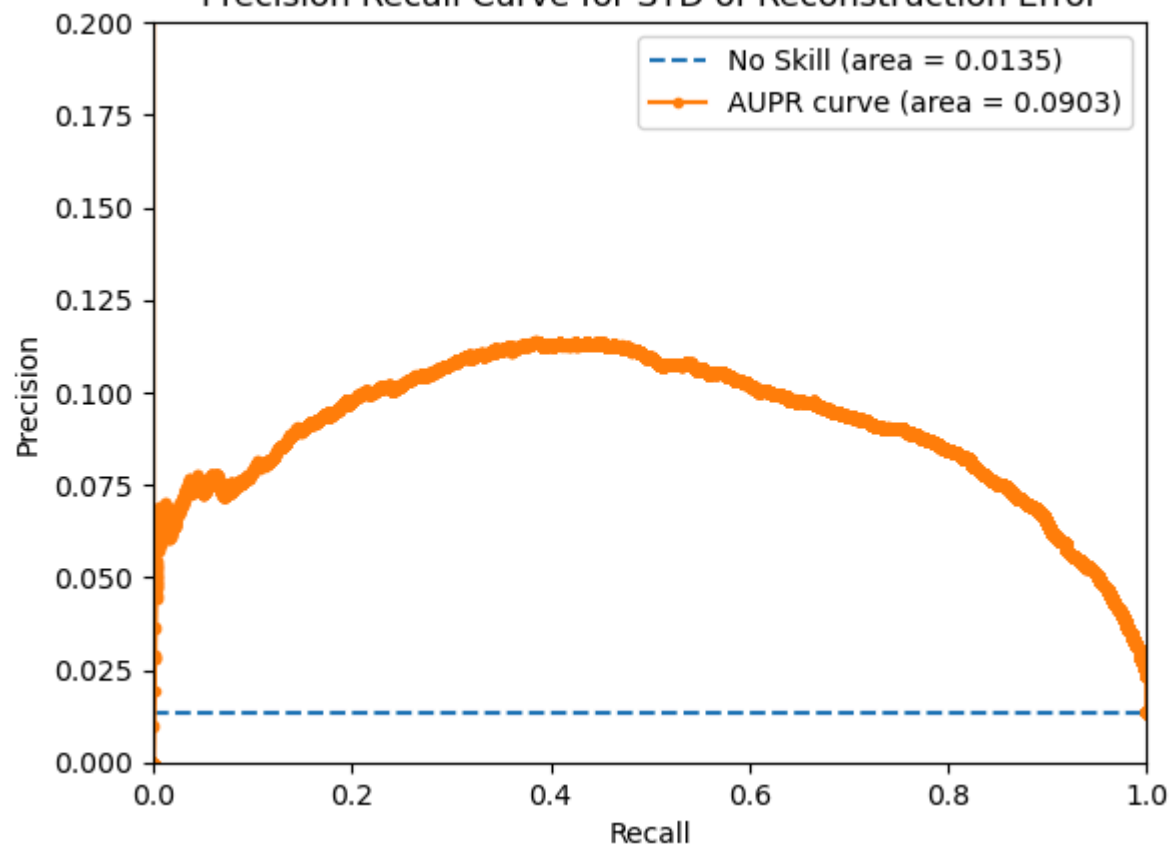
Precision Recall Curve for Mean of Reconstruction Error



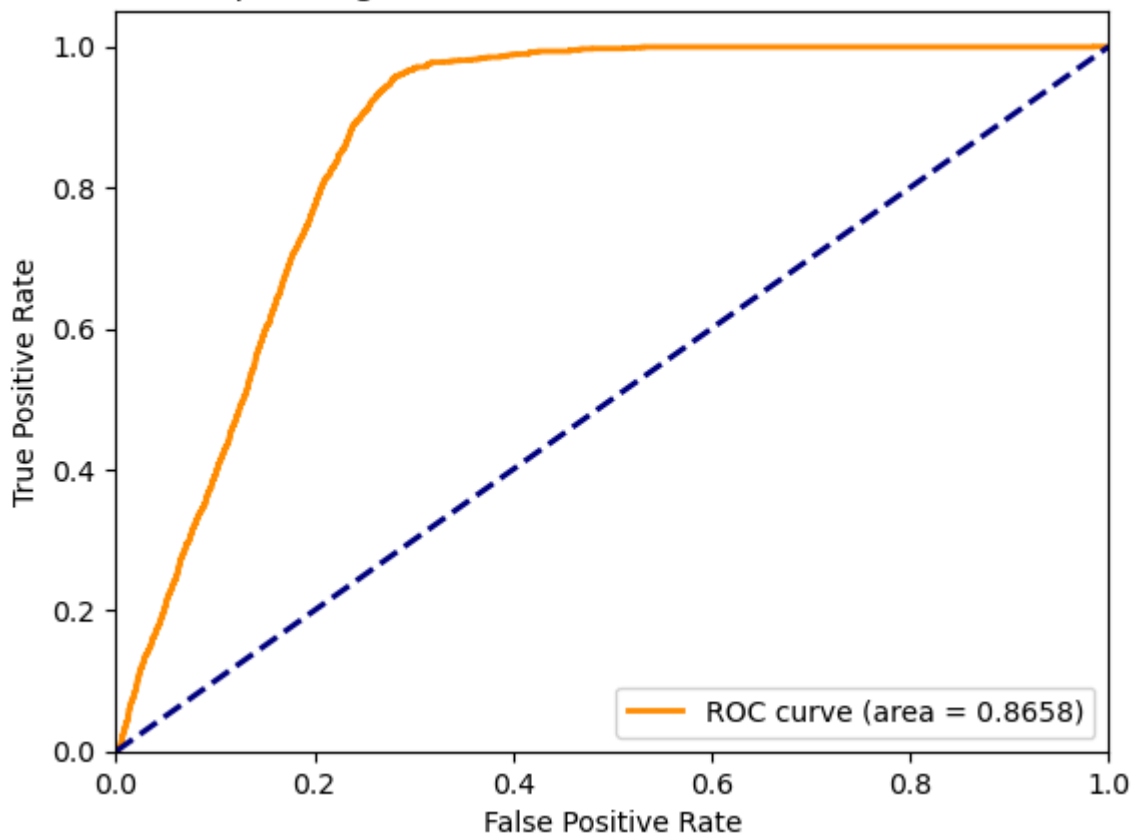
Receiver Operating Characteristic for STD of Reconstruction Error



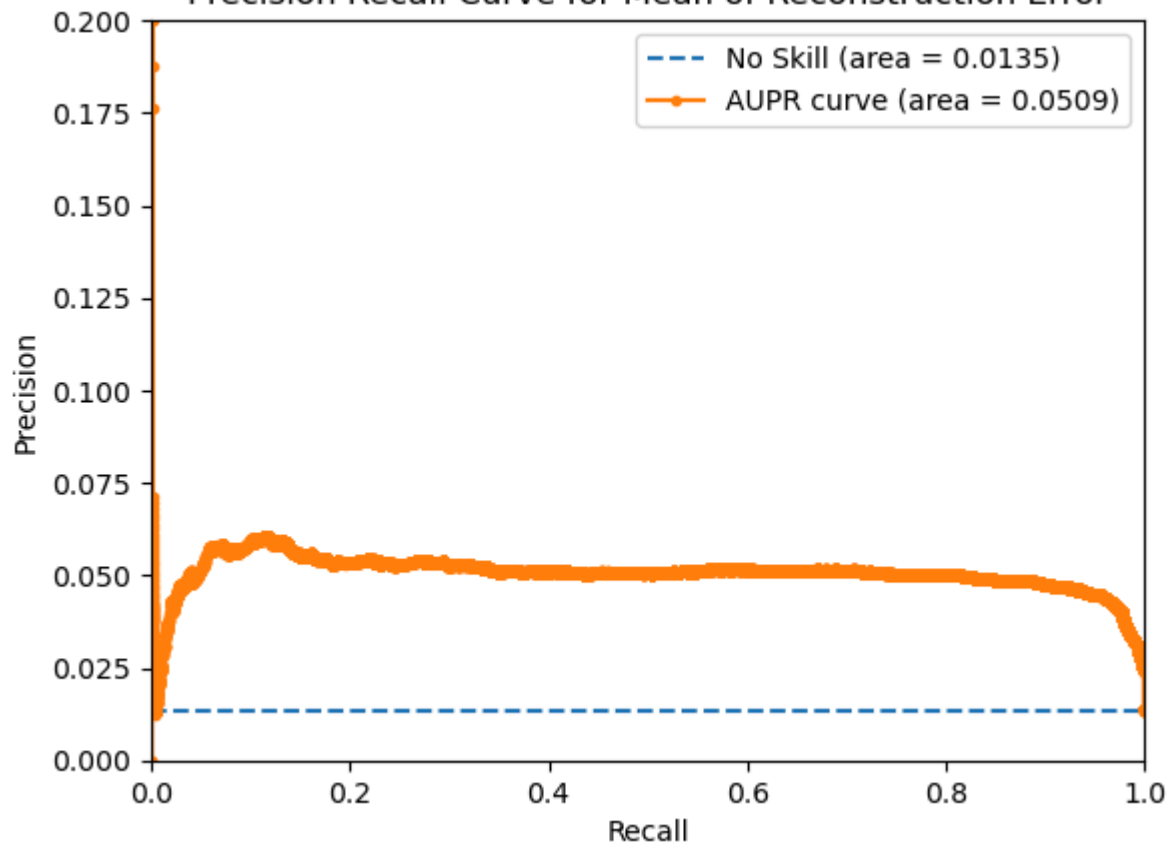
Precision Recall Curve for STD of Reconstruction Error



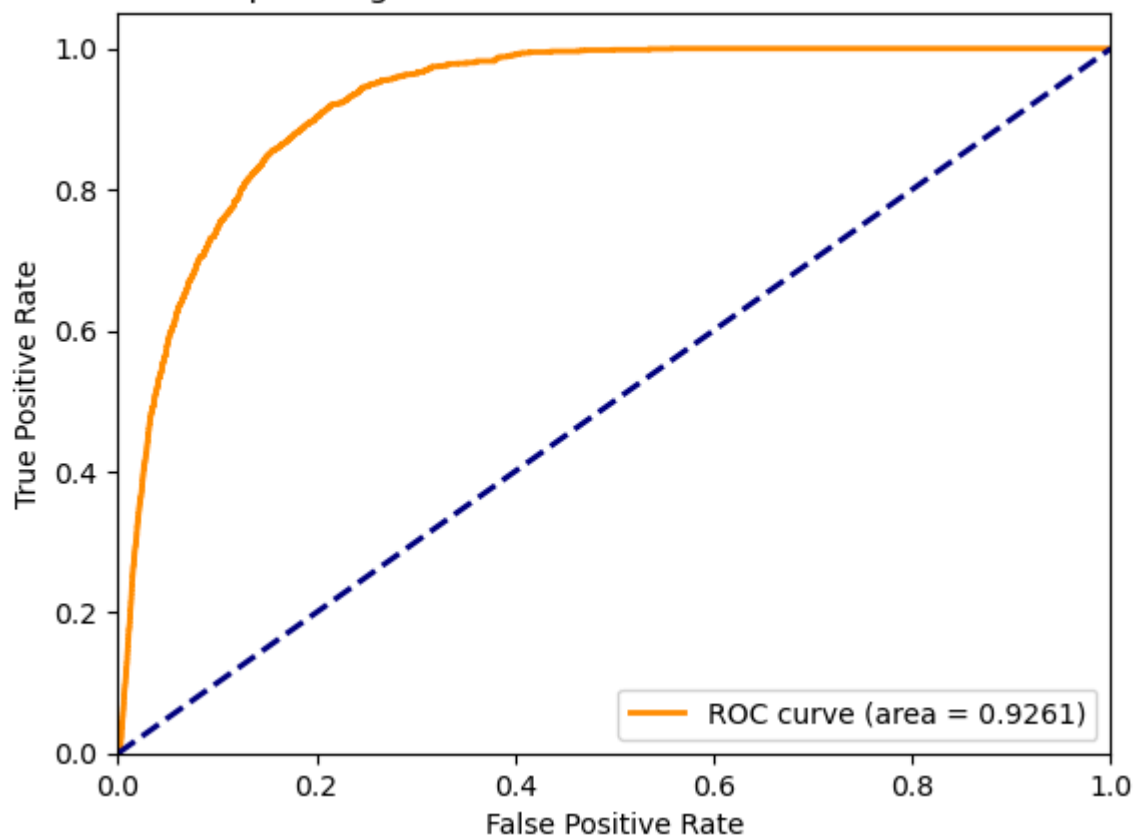
Receiver Operating Characteristic for Mean of Reconstruction Error



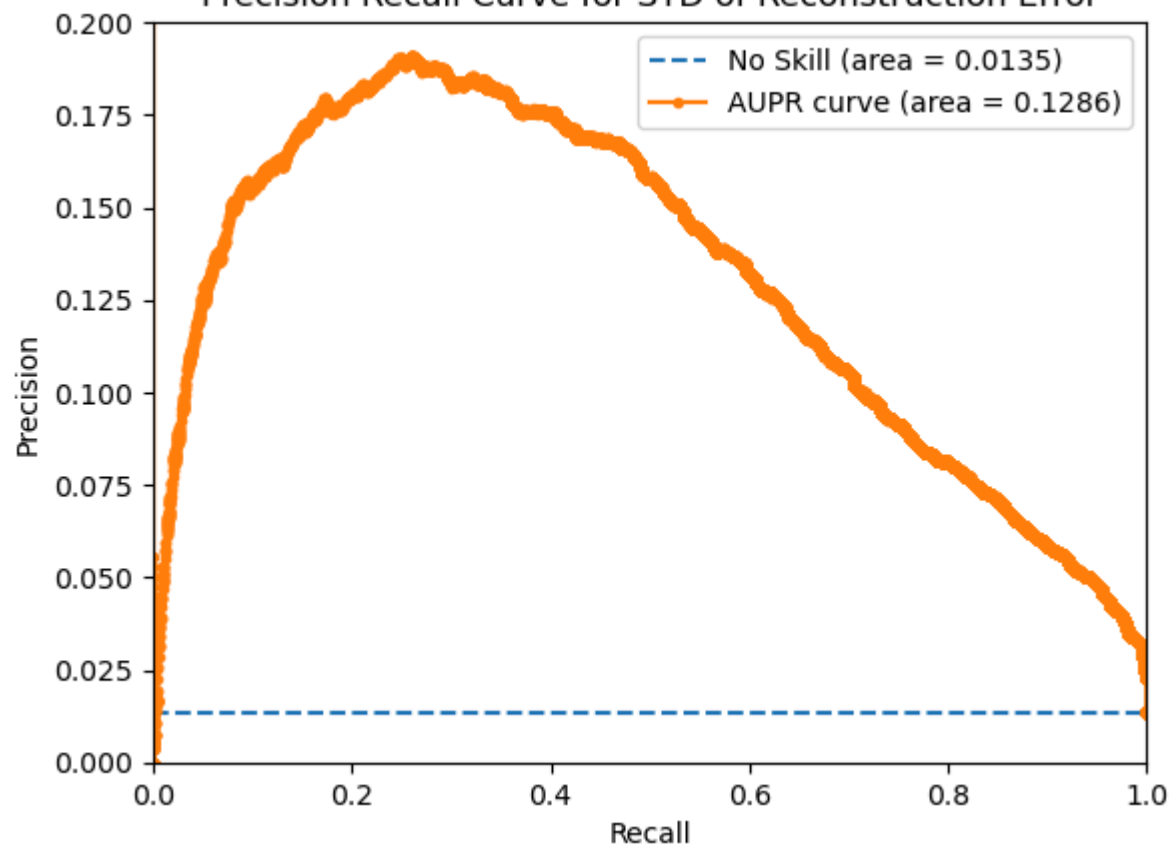
Precision Recall Curve for Mean of Reconstruction Error



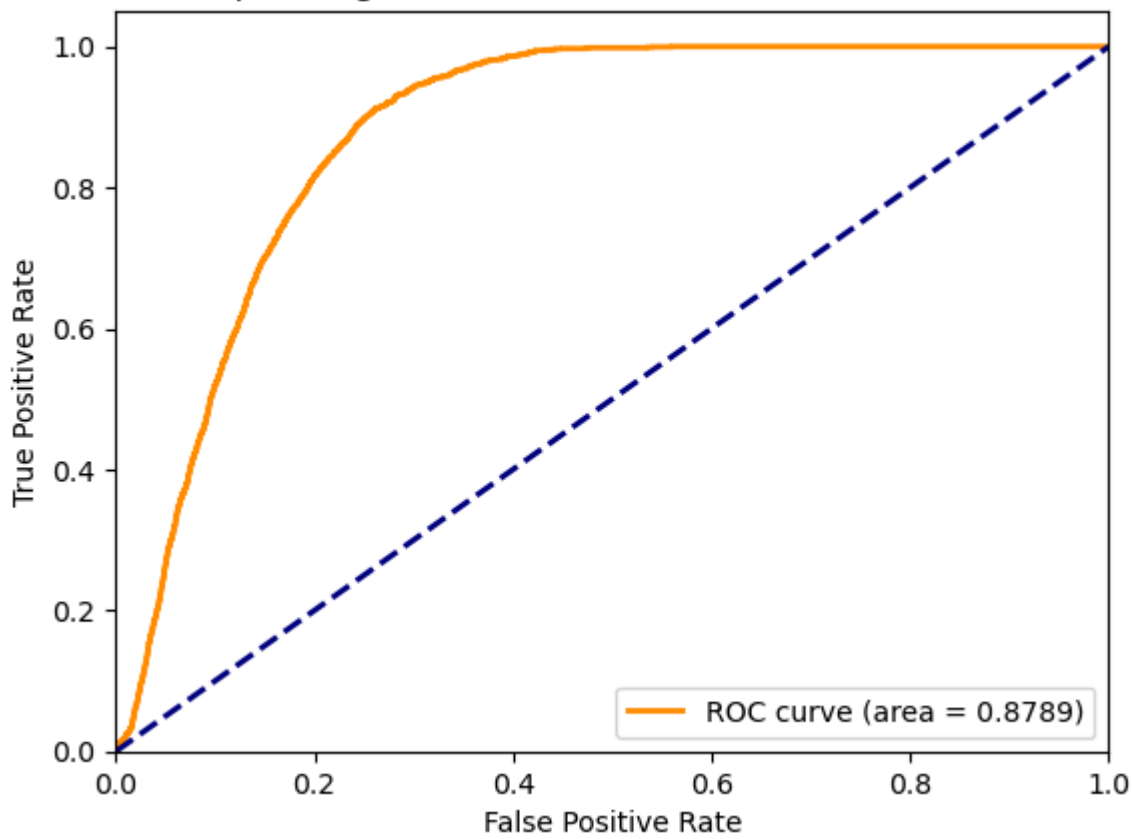
Receiver Operating Characteristic for STD of Reconstruction Error



Precision Recall Curve for STD of Reconstruction Error



Receiver Operating Characteristic for Mean of Reconstruction Error



Precision Recall Curve for Mean of Reconstruction Error

