

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

Modality 2 - IP  
Non Falls - 48, Falls - 173

Train Dataloader - 48  
Test Dataloader - 173

Device Used - cuda

Model Used - LateConcatenation\_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 = SmoothL1Loss()

Training has Begun  
epoch [1/20], loss:0.0000  
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 0.857, FPR 0.143, Precision 0.064, Recall 0.857  
tn 109190, fp 18279, fn 207, tp 1241  
std_AUROC 0.923  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.869, FPR 0.163, Precision 0.057, Recall 0.869  
tn 106701, fp 20768, fn 190, tp 1258  
mean_AUROC 0.922  
-----
```

```
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.  
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should  
be meaningless  
  warnings.warn(  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.  
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres  
holds.  
  warnings.warn(  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.  
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should  
be meaningless  
  warnings.warn(  
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.  
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres  
holds.  
  warnings.warn(  
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\funct  
ions.py:302: 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 0.868, FPR 0.200, Precision 0.047, Recall 0.868  
tn 101920, fp 25549, fn 191, tp 1257  
std_AUROC 0.901  
-----
```

```
-----  
Mean Global Classification Results  
TPR 0.881, FPR 0.196, Precision 0.049, Recall 0.881  
tn 102529, fp 24940, fn 173, tp 1275  
mean_AUROC 0.912  
-----
```

```

c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should
be meaningless
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres
holds.
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should
be meaningless
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres
holds.
    warnings.warn(
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\funct
ions.py:302: 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 0.878, FPR 0.168, Precision 0.056, Recall 0.878
tn 106088, fp 21381, fn 176, tp 1272
std_AUROC 0.931
-----

```

```

-----
Mean Global Classification Results
TPR 0.876, FPR 0.162, Precision 0.058, Recall 0.876
tn 106818, fp 20651, fn 180, tp 1268
mean_AUROC 0.924
-----

```

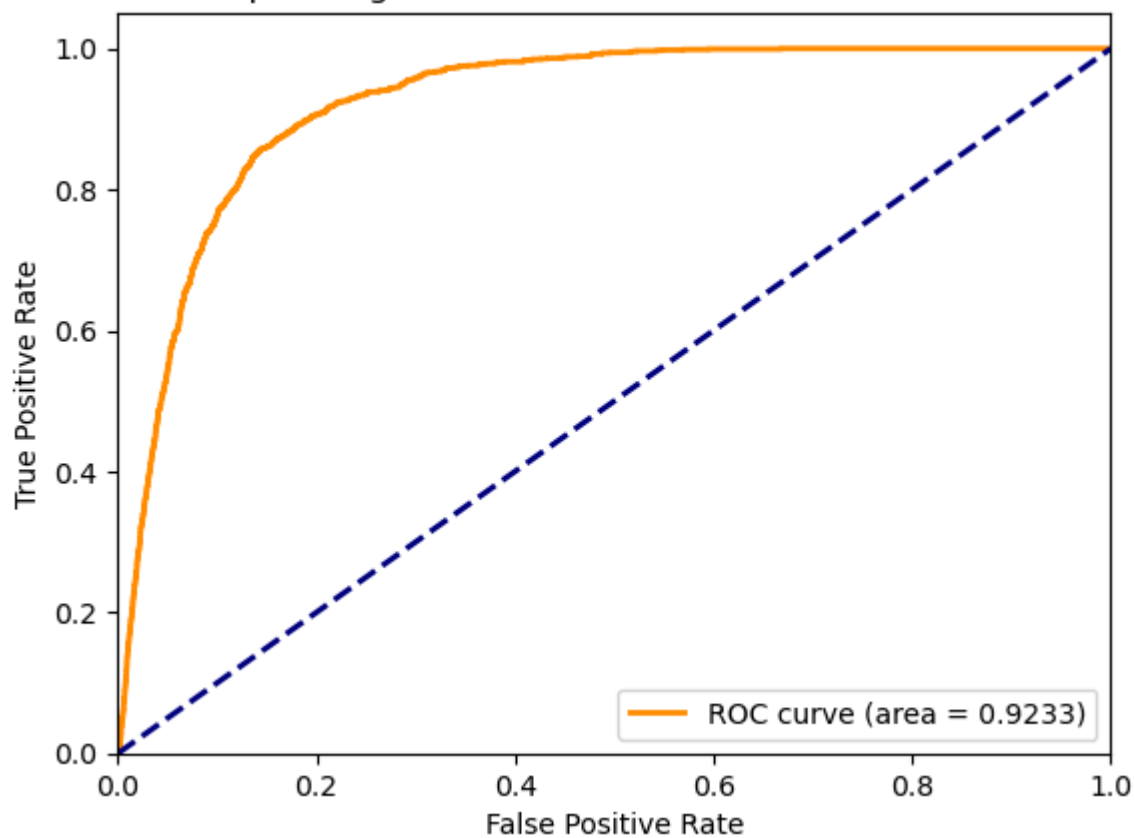
```

c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should
be meaningless
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres
holds.
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:1132: UndefinedMetricWarning: No positive samples in y_true, true positive value should
be meaningless
    warnings.warn(
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metrics\_ranking.
py:979: UserWarning: No positive class found in y_true, recall is set to one for all thres
holds.
    warnings.warn(
d:\Abdul Rasheed NITT\Academics\Eighth Semester\FYP\Implementation\FallDetection\Code\funct
ions.py:302: 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,

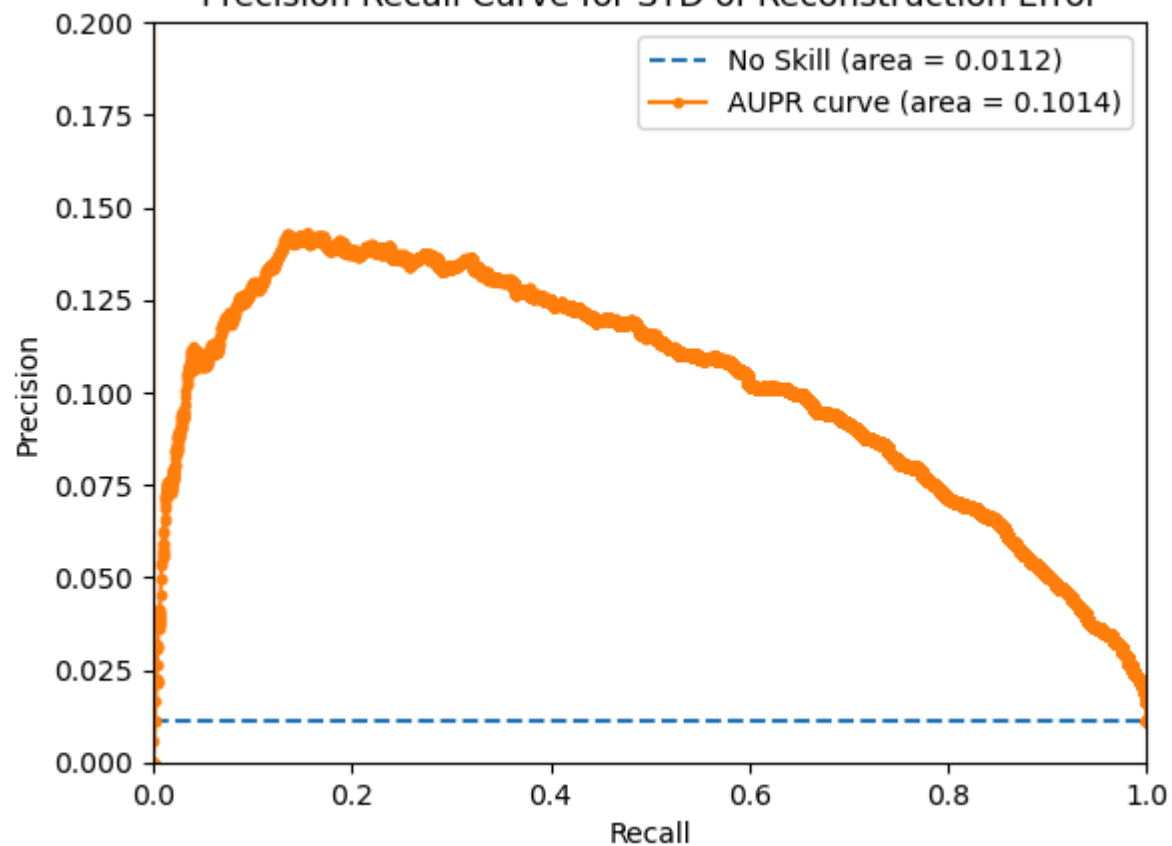
```

()

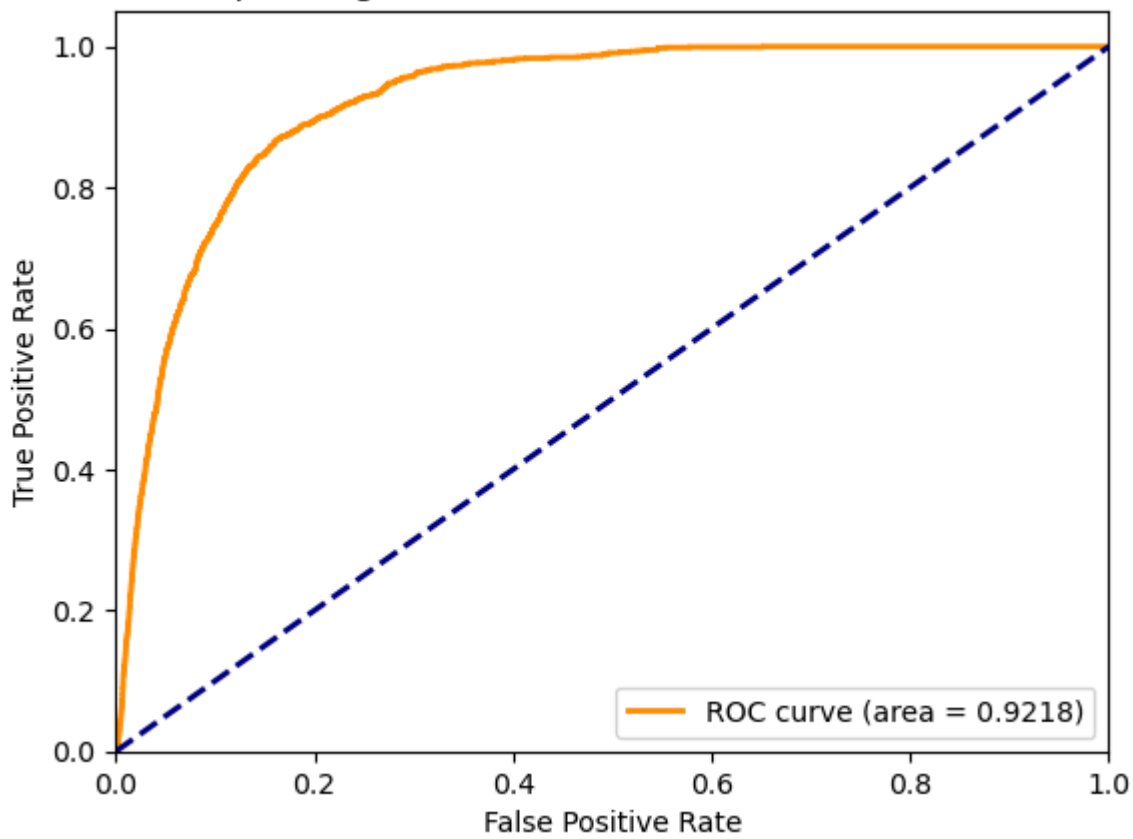
Receiver Operating Characteristic for STD of Reconstruction Error



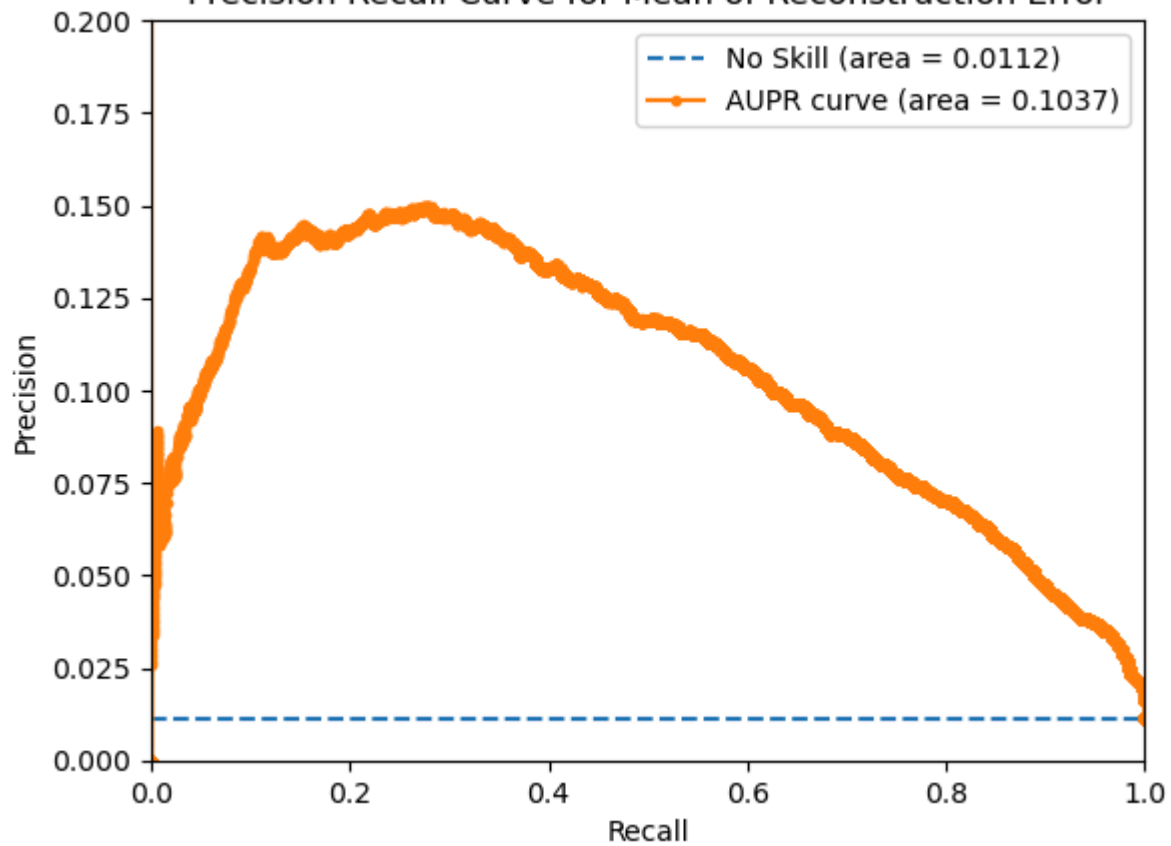
Precision Recall Curve for STD of Reconstruction Error



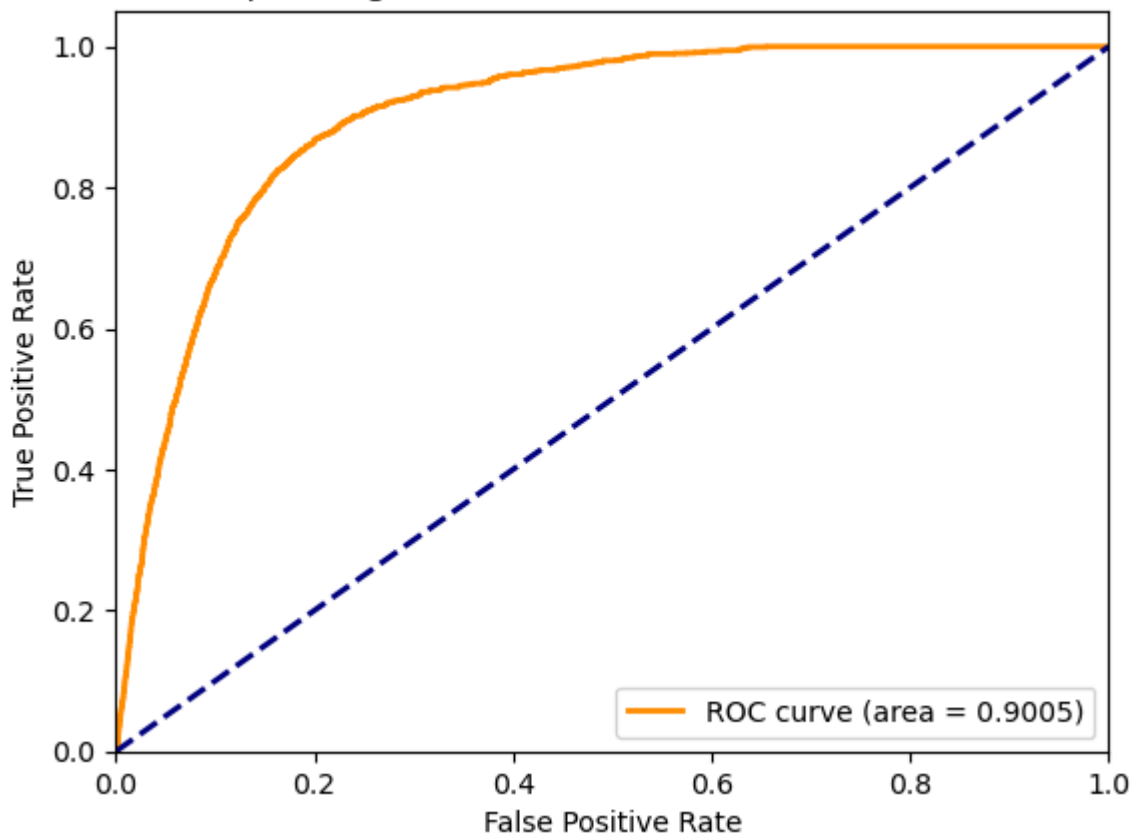
Receiver Operating Characteristic for Mean of Reconstruction Error



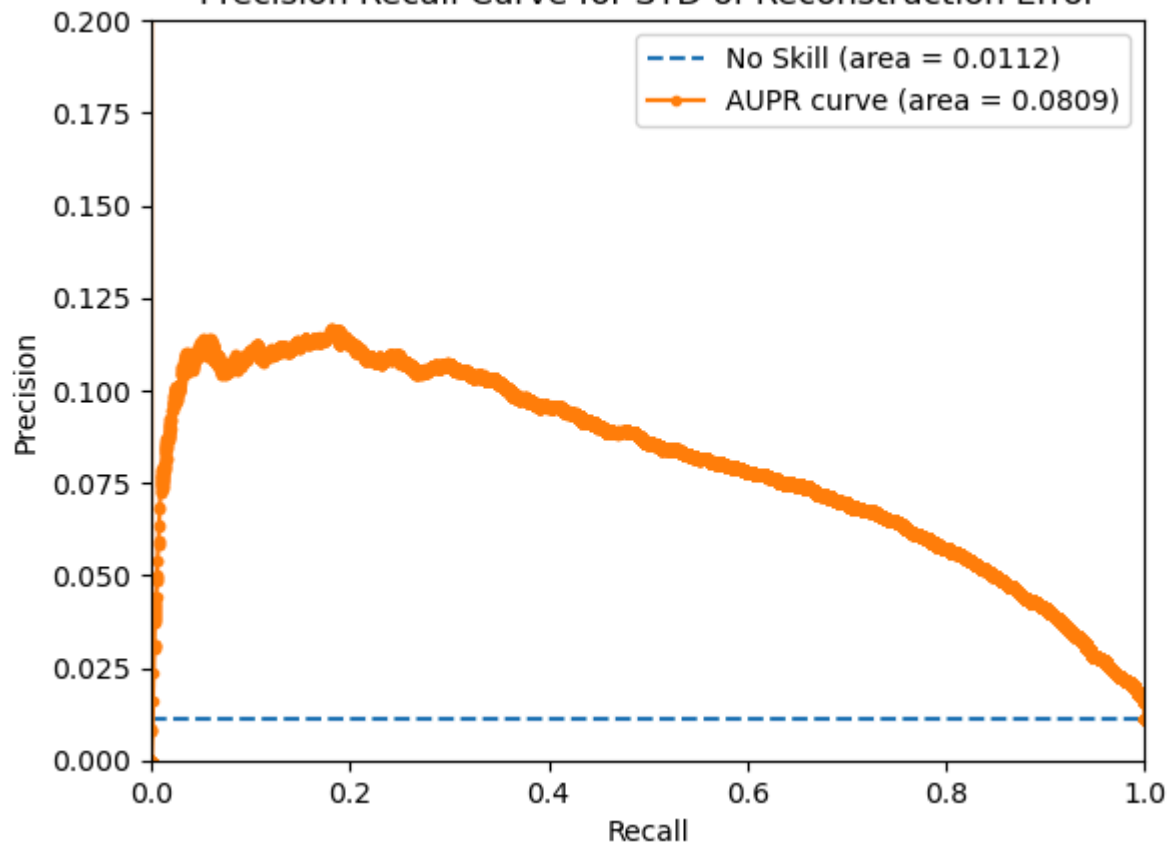
Precision Recall Curve for Mean of Reconstruction Error



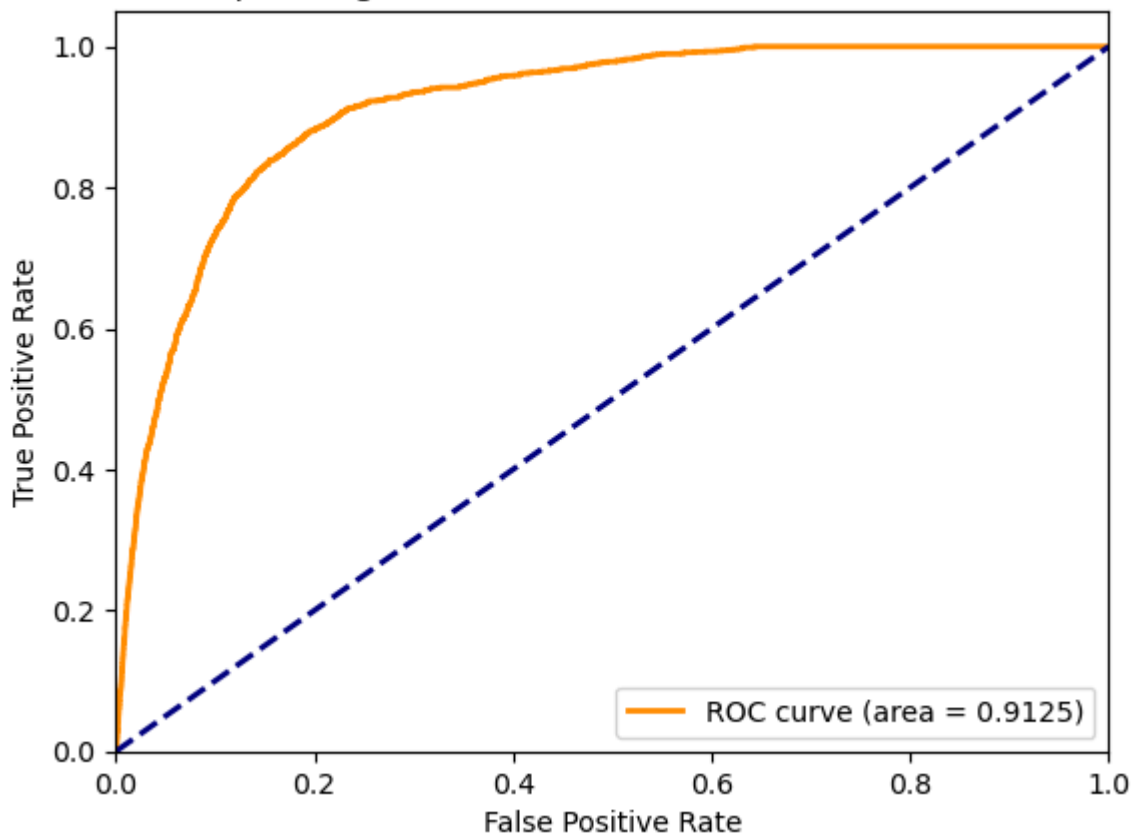
Receiver Operating Characteristic for STD of Reconstruction Error



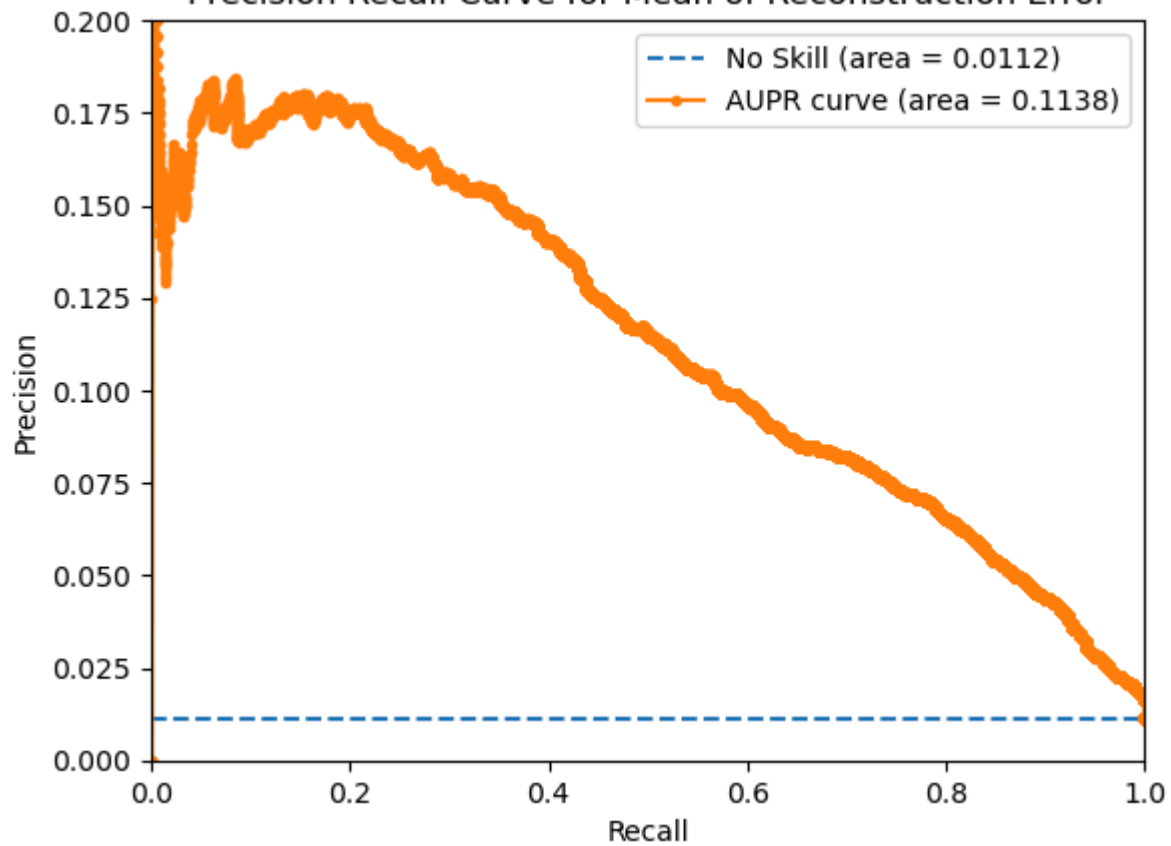
Precision Recall Curve for STD of Reconstruction Error



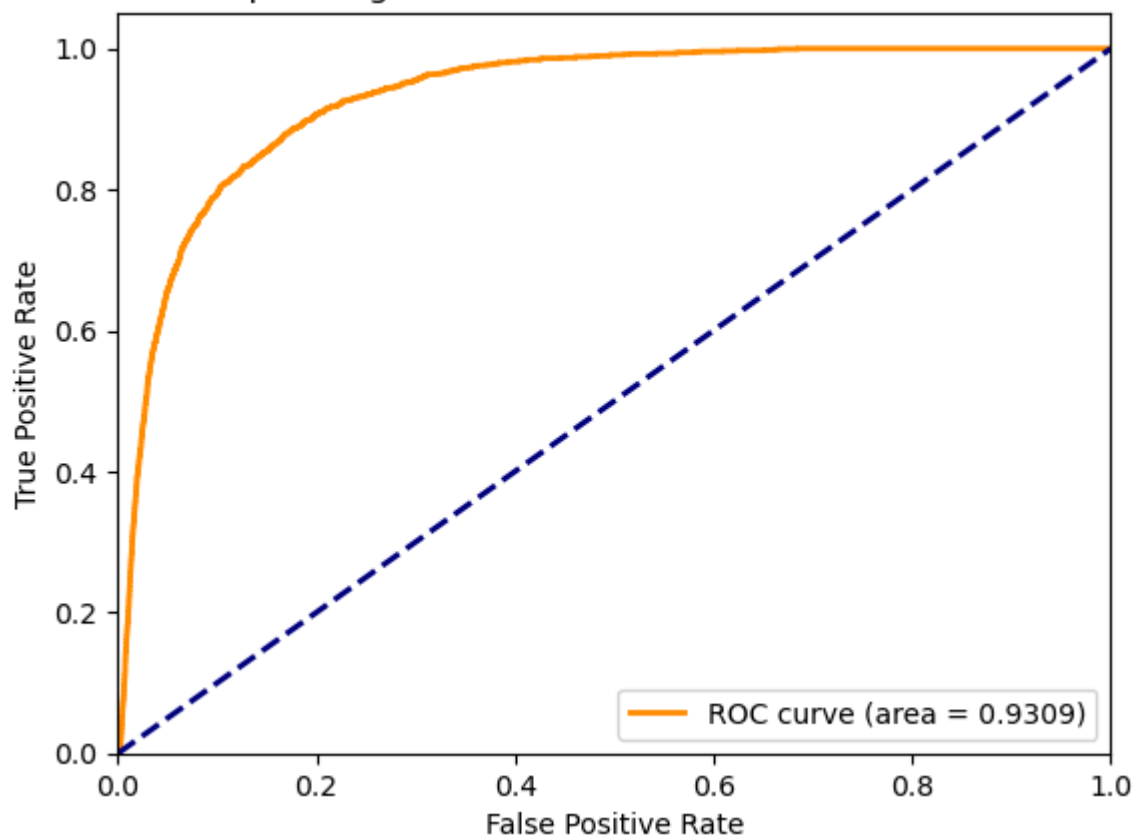
Receiver Operating Characteristic for Mean of Reconstruction Error



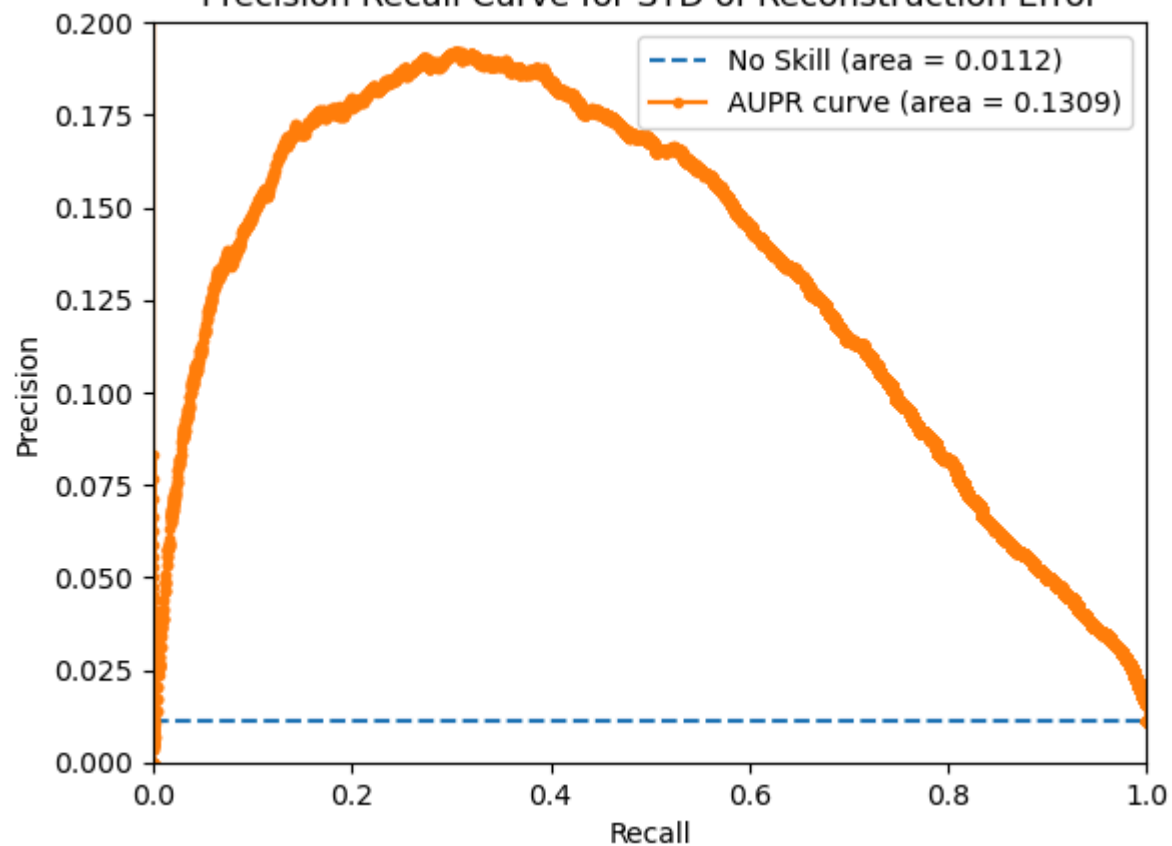
Precision Recall Curve for Mean of Reconstruction Error



Receiver Operating Characteristic for STD of Reconstruction Error

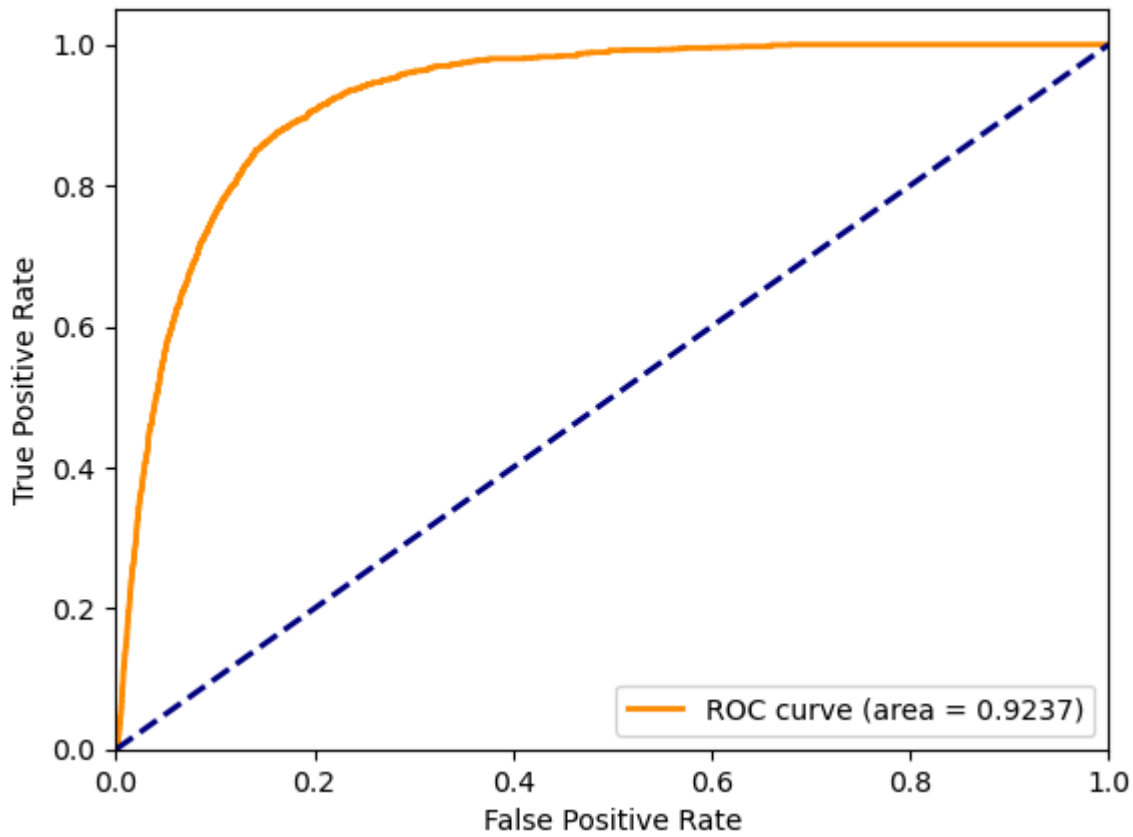


Precision Recall Curve for STD of Reconstruction Error





Receiver Operating Characteristic for Mean of Reconstruction Error



Precision Recall Curve for Mean of Reconstruction Error

