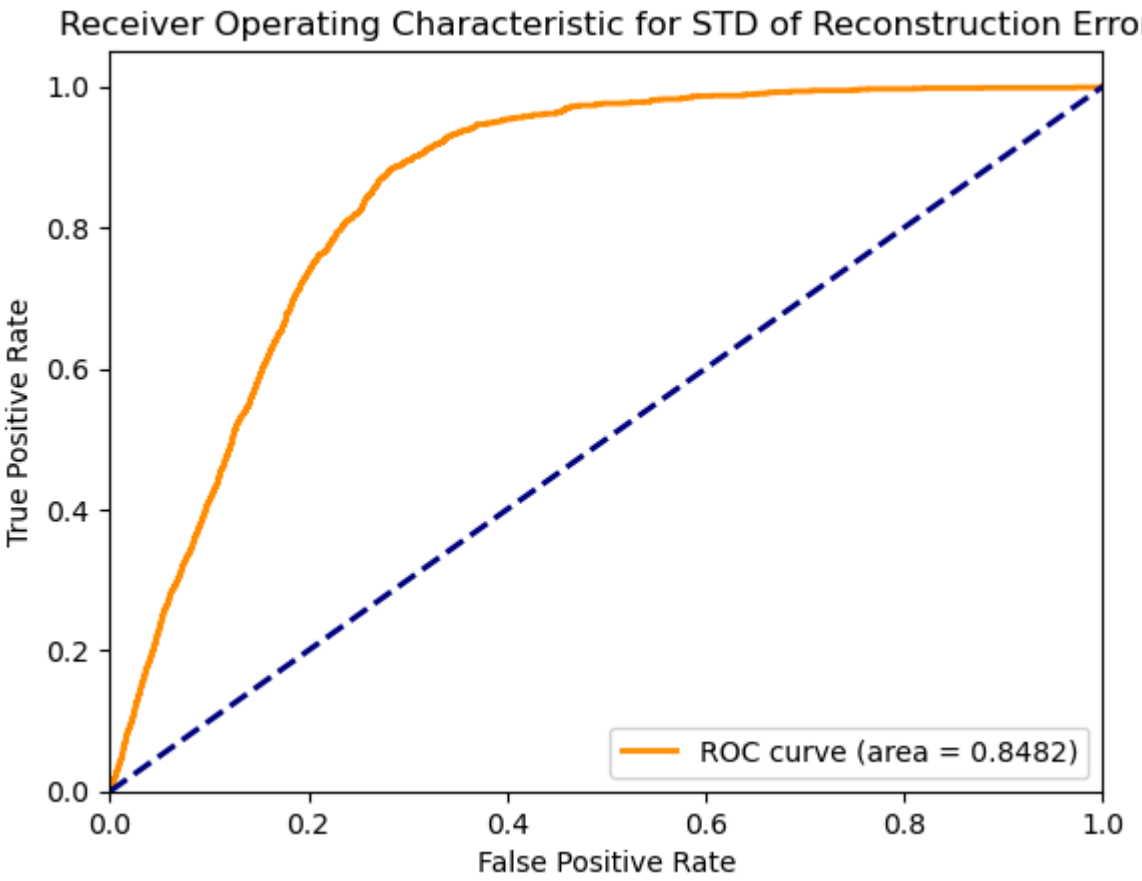
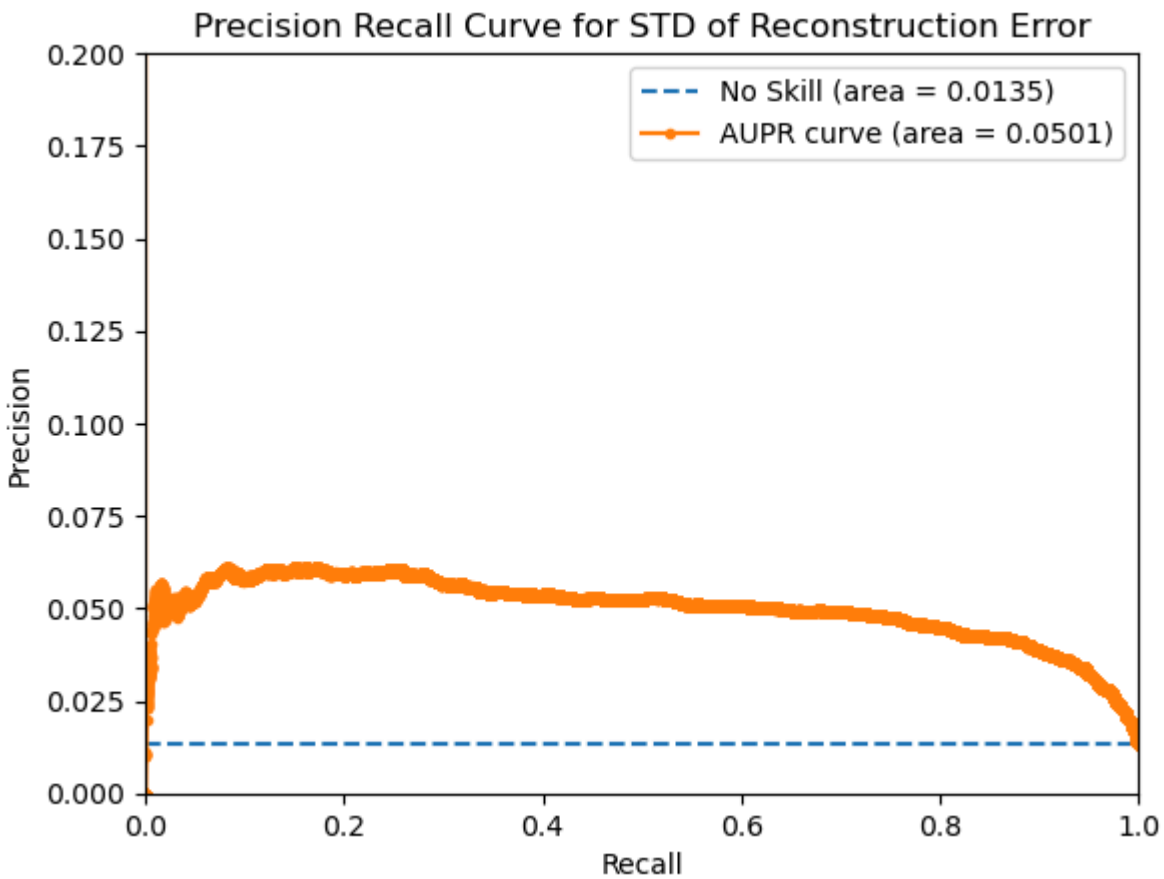
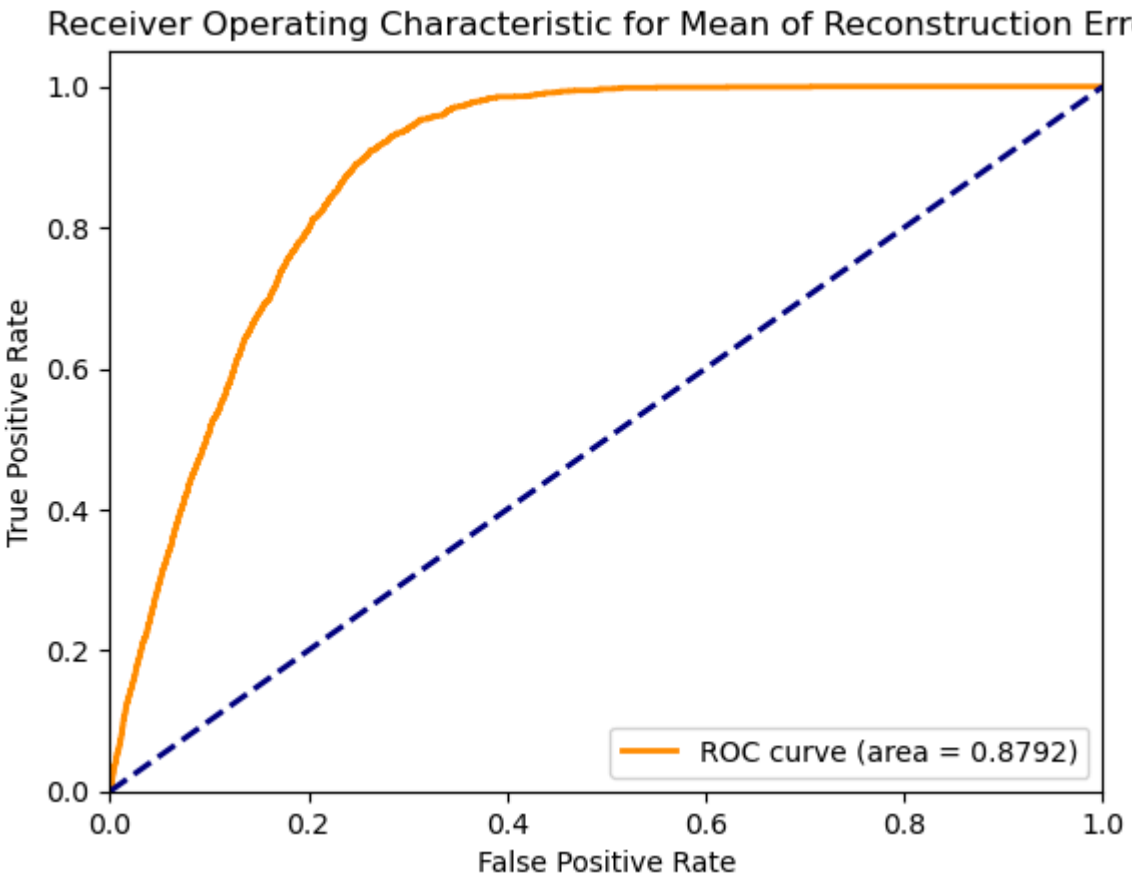
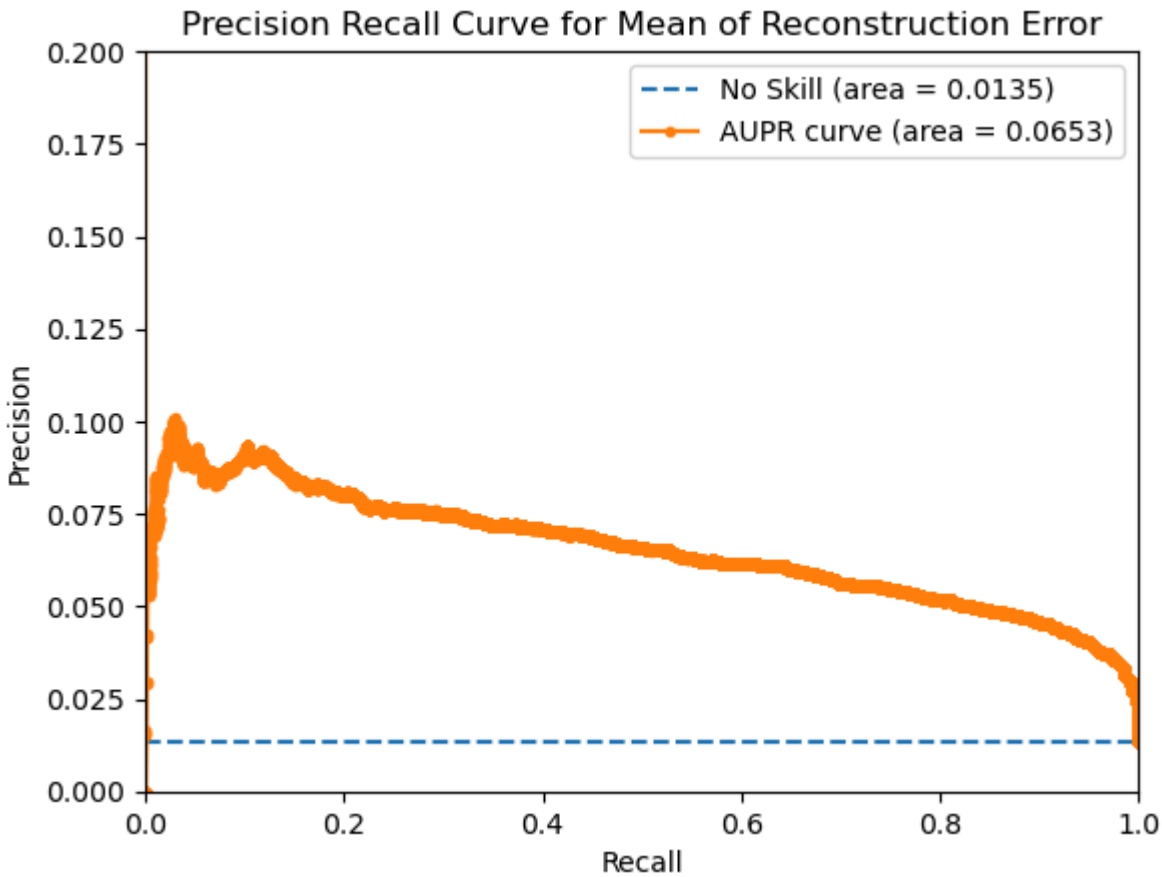
```
Modality 1 - Thermal
Non Falls - 48, Falls - 173

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 - False
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 = L1Loss()

Training has Begun
epoch [1/20], loss:0.0450
epoch [2/20], loss:0.0372
epoch [3/20], loss:0.0346
epoch [4/20], loss:0.0330
epoch [5/20], loss:0.0318
epoch [6/20], loss:0.0305
epoch [7/20], loss:0.0295
epoch [8/20], loss:0.0289
epoch [9/20], loss:0.0286
epoch [10/20], loss:0.0283
epoch [11/20], loss:0.0280
epoch [12/20], loss:0.0278
epoch [13/20], loss:0.0275
epoch [14/20], loss:0.0272
epoch [15/20], loss:0.0272
epoch [16/20], loss:0.0272
epoch [17/20], loss:0.0272
epoch [18/20], loss:0.0272
epoch [19/20], loss:0.0272
epoch [20/20], loss:0.0271
Training has Completed

Forward pass occuring
Forward pass completed

MultiModal_Thermal_T3_ONI_IR_T_2024-04-17-02-30-02
```

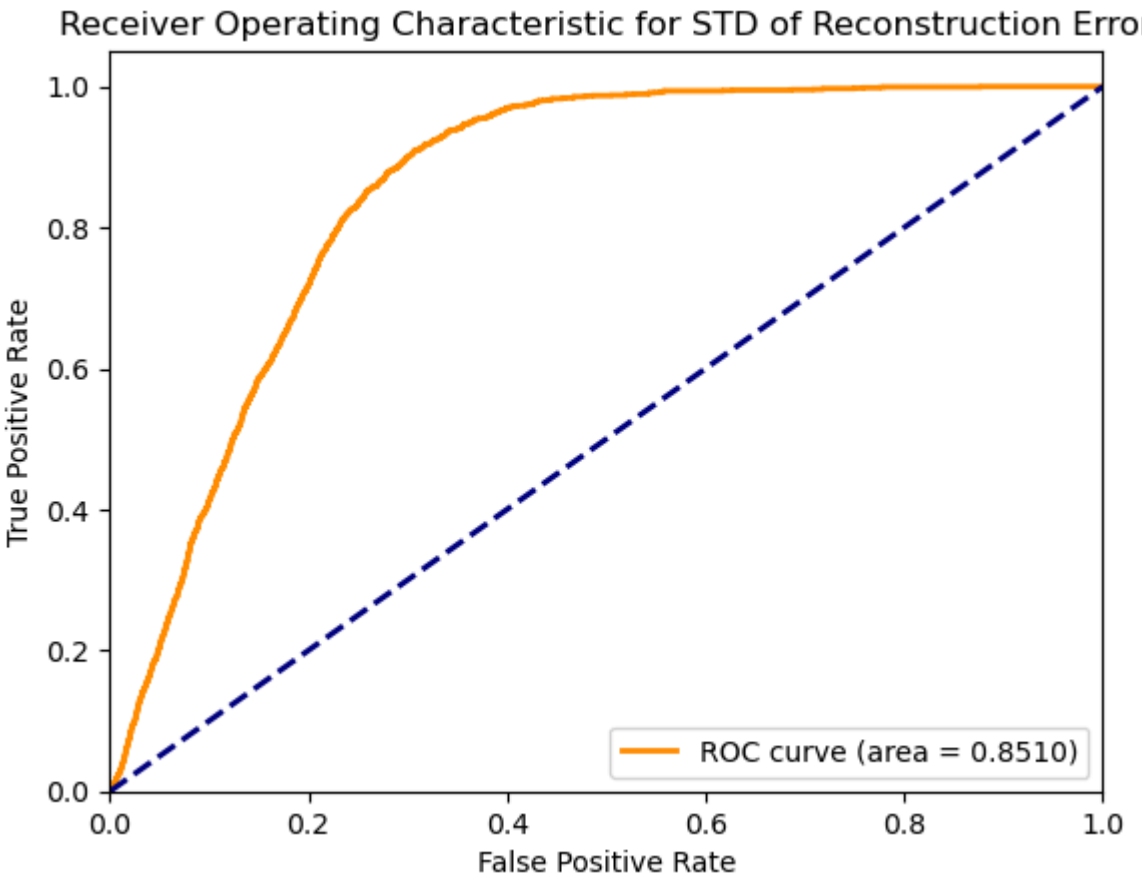
```
----------------------------------
STD Global Classification Results
TPR 0.882, FPR 0.282, Precision 0.041, Recall 0.882
tn 94134, fp 36988, fn 212, tp 1584
std_AUROC  0.848
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.910, FPR 0.263, Precision 0.045, Recall 0.910
tn 96667, fp 34455, fn 162, tp 1634
mean_AUROC 0.879
----------------------------------
d:\Abdul Rasheed NITT\Academics\Eigth Semester\FYP\Implementation\FallDetection\Code\funct
ions.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 0.909, FPR 0.307, Precision 0.039, Recall 0.909
tn 90875, fp 40247, fn 163, tp 1633
std_AUROC  0.851
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.908, FPR 0.228, Precision 0.052, Recall 0.908
tn 101213, fp 29909, fn 165, tp 1631
mean_AUROC 0.885
----------------------------------
d:\Abdul Rasheed NITT\Academics\Eigth Semester\FYP\Implementation\FallDetection\Code\funct
ions.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 0.897, FPR 0.274, Precision 0.043, Recall 0.897
tn 95228, fp 35894, fn 185, tp 1611
std_AUROC  0.865
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.899, FPR 0.242, Precision 0.048, Recall 0.899
tn 99443, fp 31679, fn 182, tp 1614
mean_AUROC 0.887
----------------------------------
d:\Abdul Rasheed NITT\Academics\Eigth Semester\FYP\Implementation\FallDetection\Code\funct
ions.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,
()
```

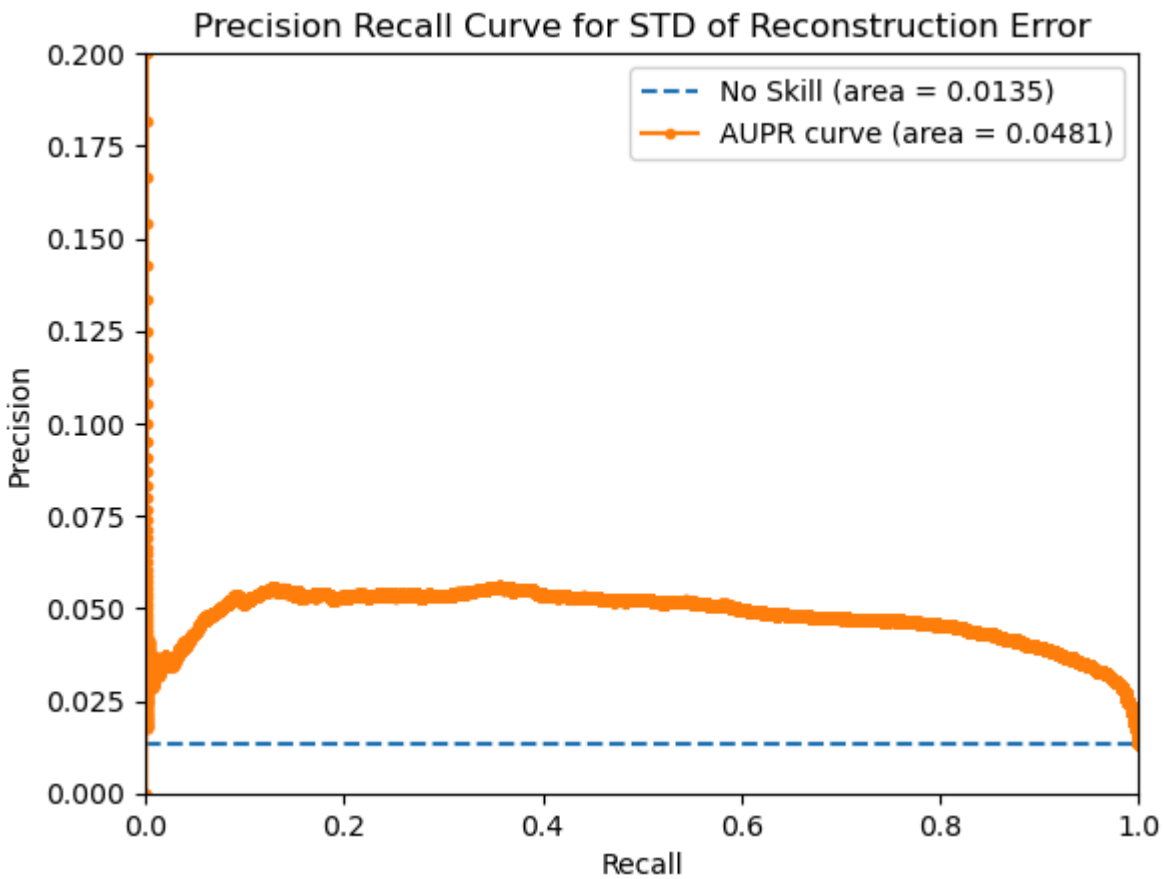

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8482)
0.0
0.2
0.4
0.6
0.8
1.0

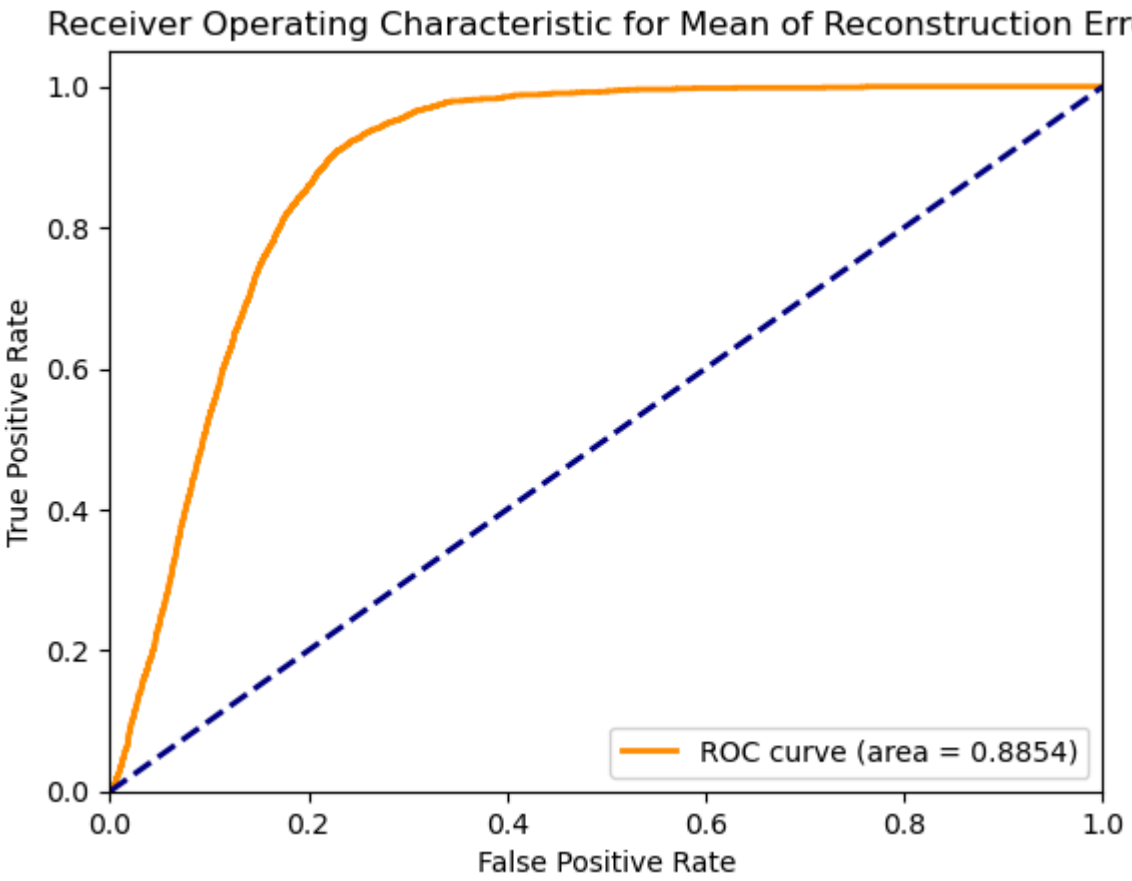

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0501)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

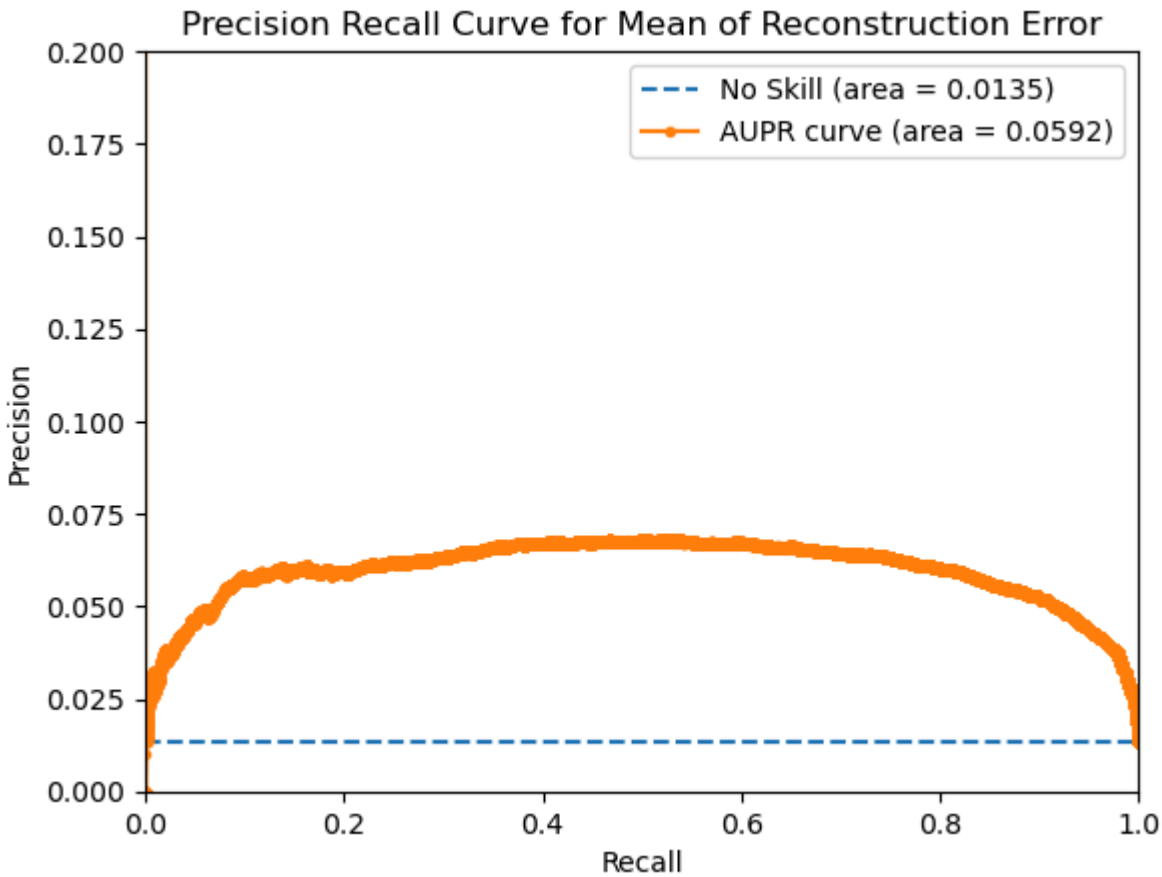

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8792)
0.0
0.2
0.4
0.6
0.8
1.0

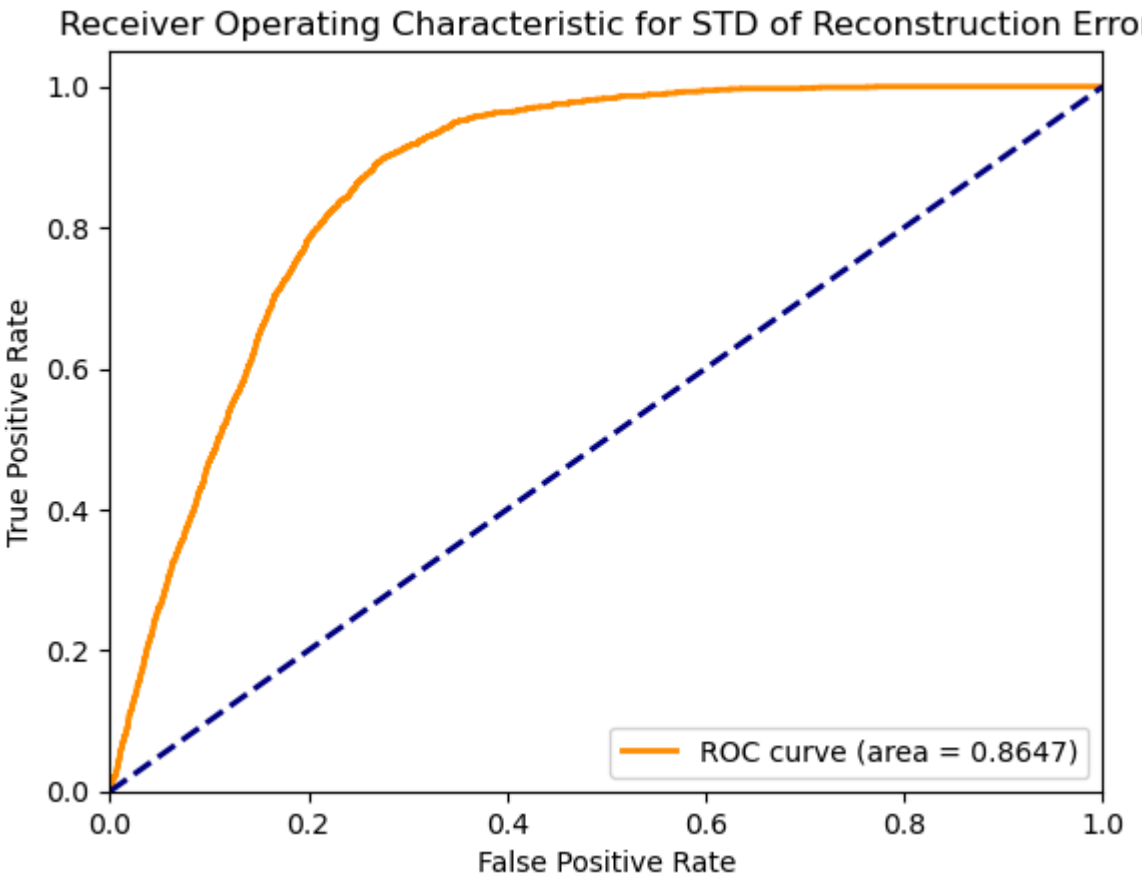

Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0653)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

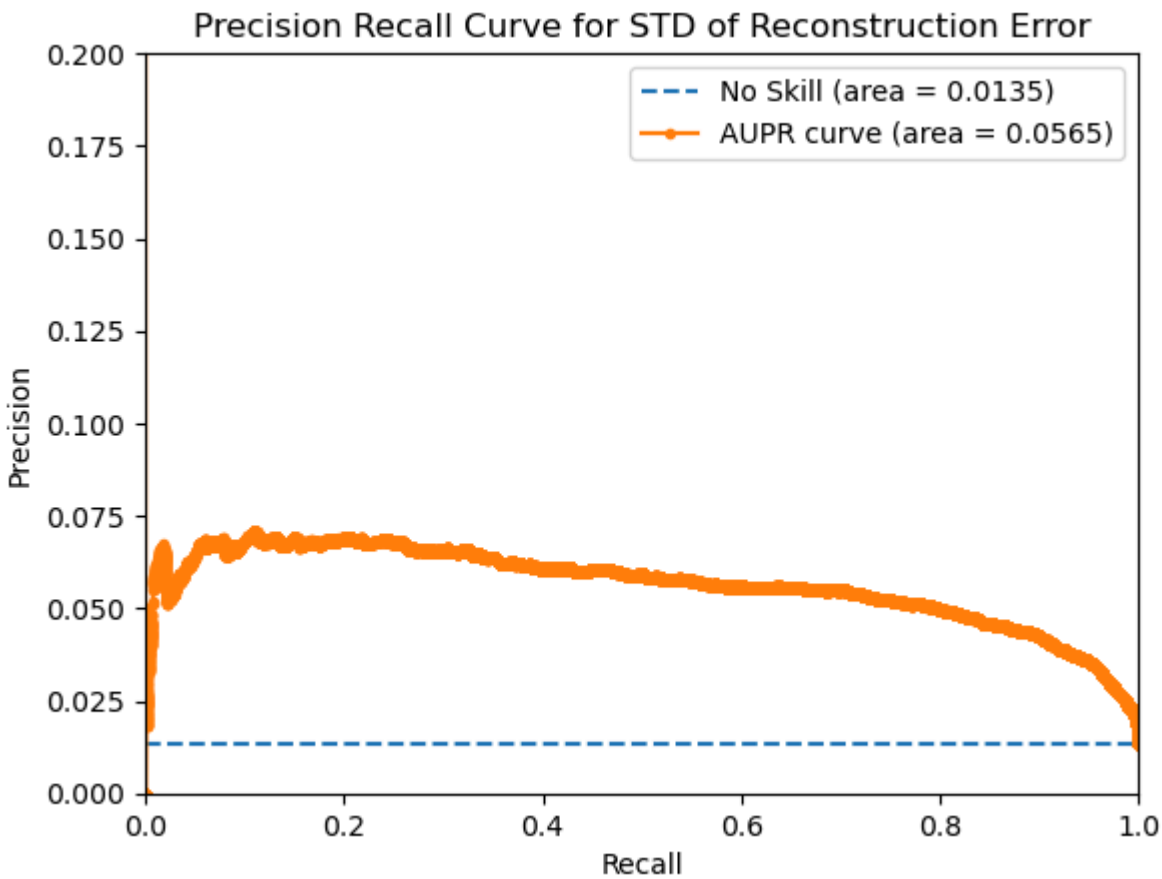

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8510)
0.0
0.2
0.4
0.6
0.8
1.0

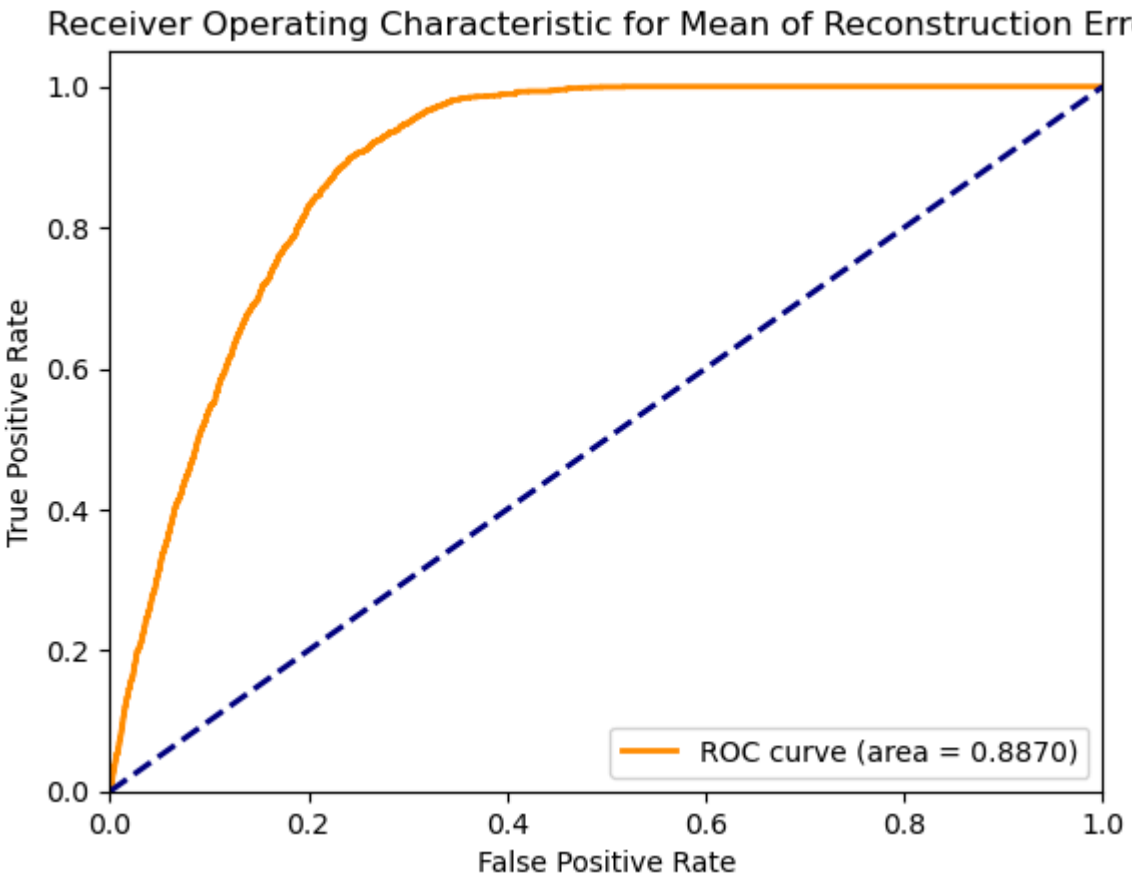

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0481)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

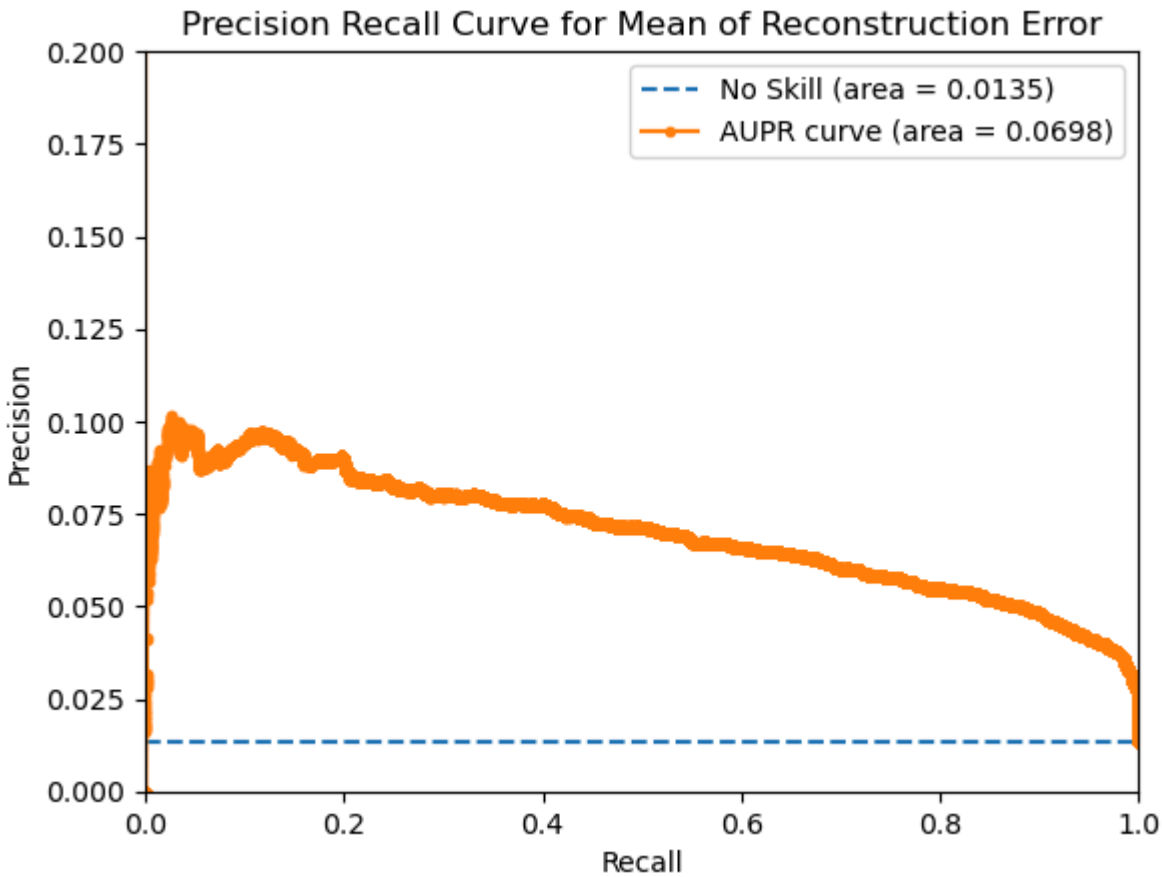

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8854)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0592)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0


Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8647)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0565)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0


Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8870)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0135)
AUPR curve (area = 0.0698)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0