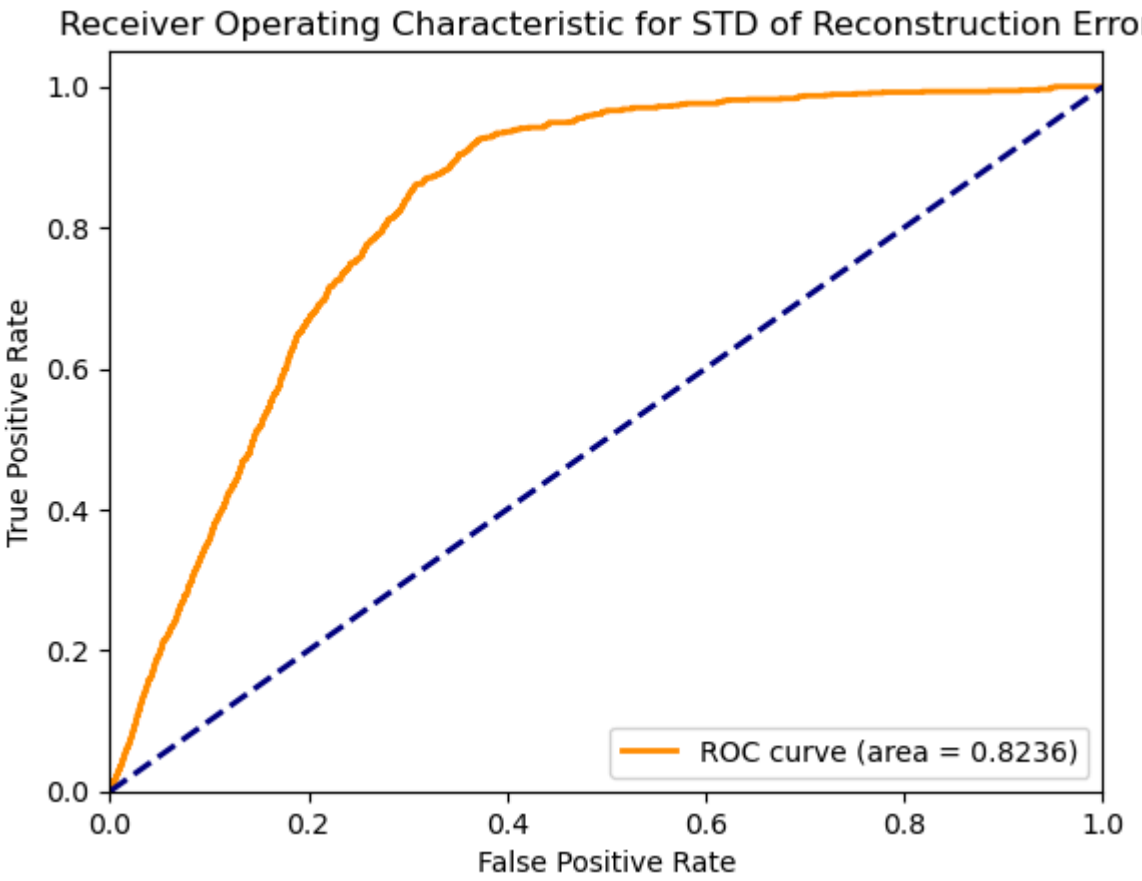
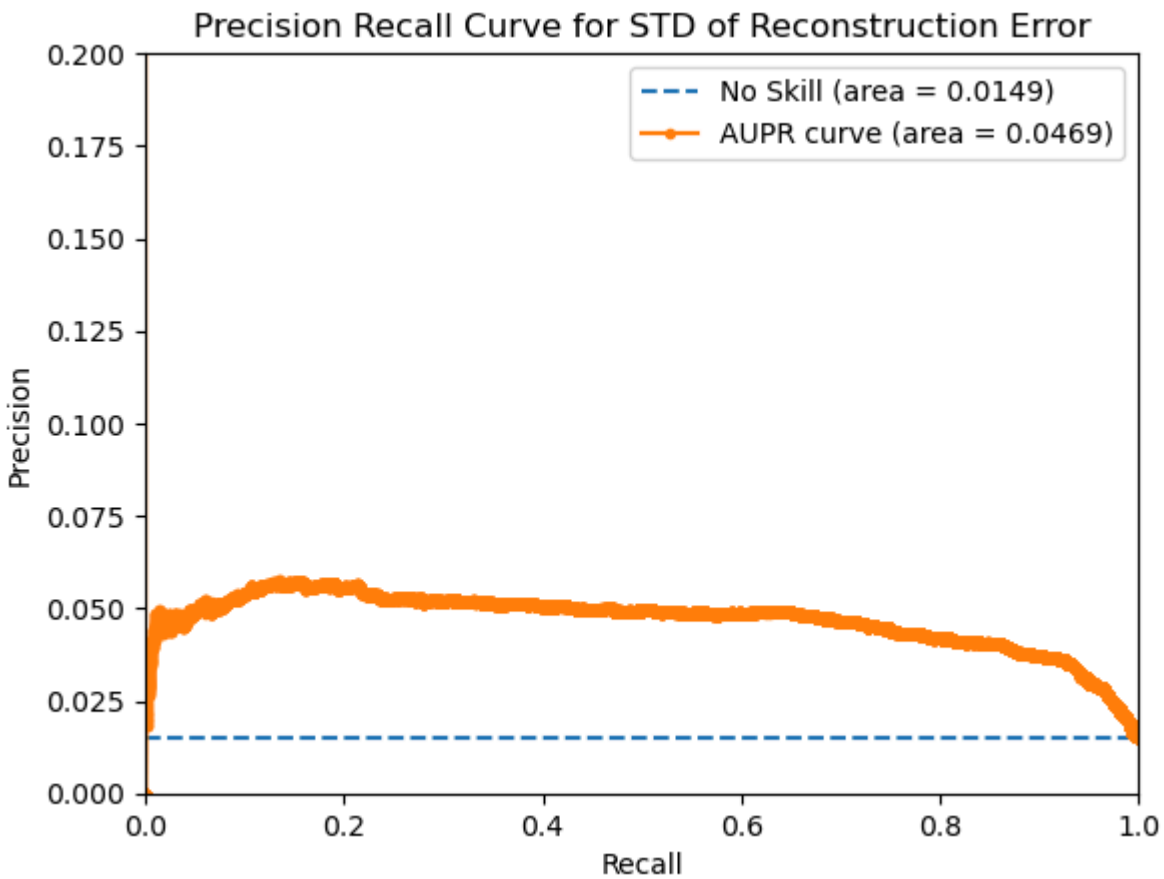
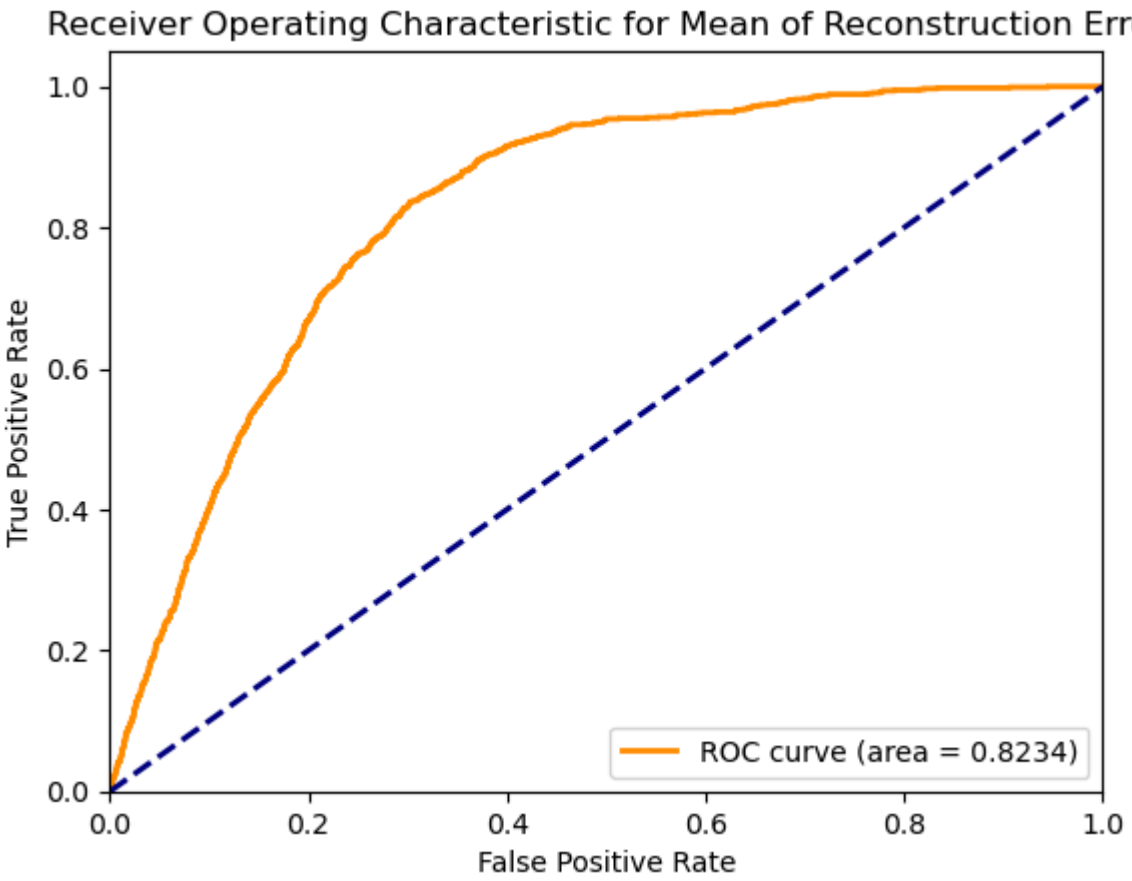
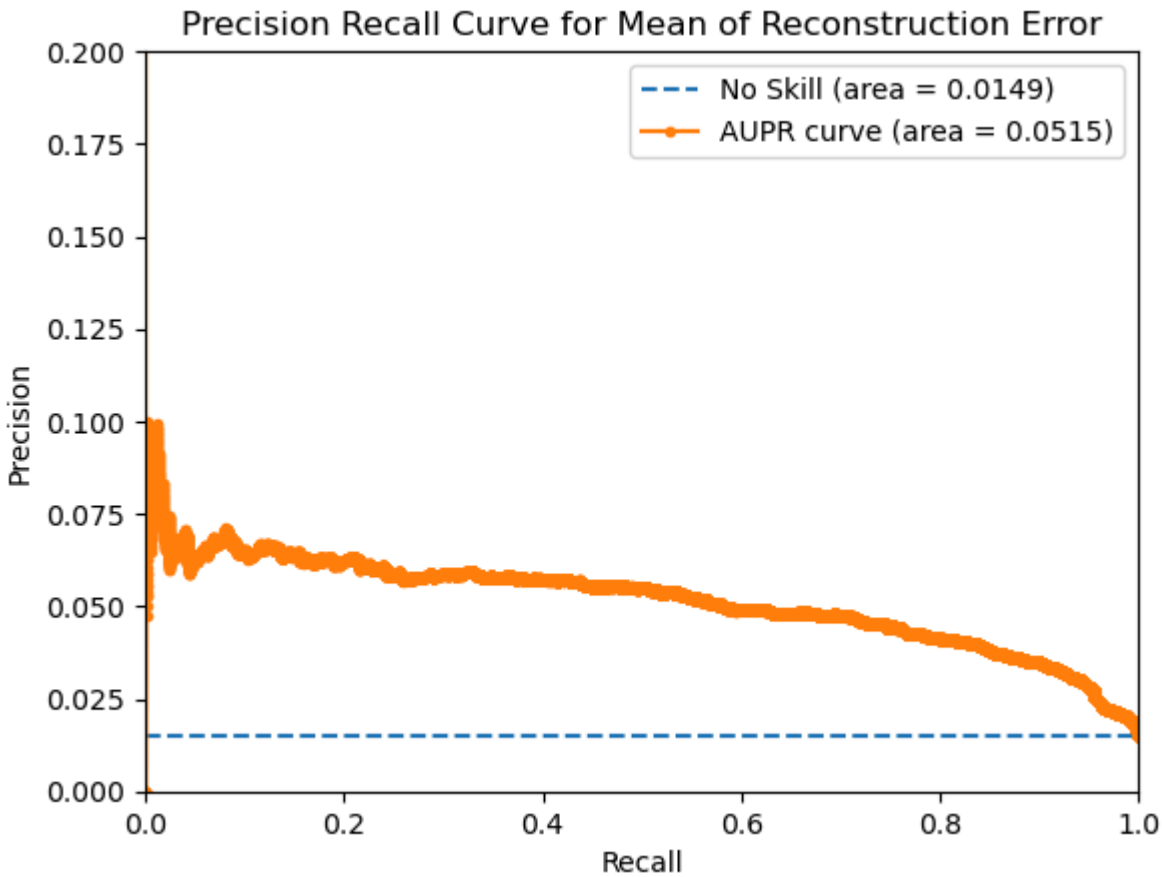
```
Modality 1 - Thermal
Non Falls - 48, Falls - 173

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 - False
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:0.0068
epoch [2/20], loss:0.0052
epoch [3/20], loss:0.0046
epoch [4/20], loss:0.0042
epoch [5/20], loss:0.0039
epoch [6/20], loss:0.0036
epoch [7/20], loss:0.0033
epoch [8/20], loss:0.0032
epoch [9/20], loss:0.0031
epoch [10/20], loss:0.0030
epoch [11/20], loss:0.0029
epoch [12/20], loss:0.0028
epoch [13/20], loss:0.0027
epoch [14/20], loss:0.0026
epoch [15/20], loss:0.0026
epoch [16/20], loss:0.0025
epoch [17/20], loss:0.0025
epoch [18/20], loss:0.0024
epoch [19/20], loss:0.0024
epoch [20/20], loss:0.0024
Training has Completed

Forward pass occuring
Forward pass completed

MultiModal_Thermal_T3_ONI_IR_T_2024-04-17-17-36-51
```

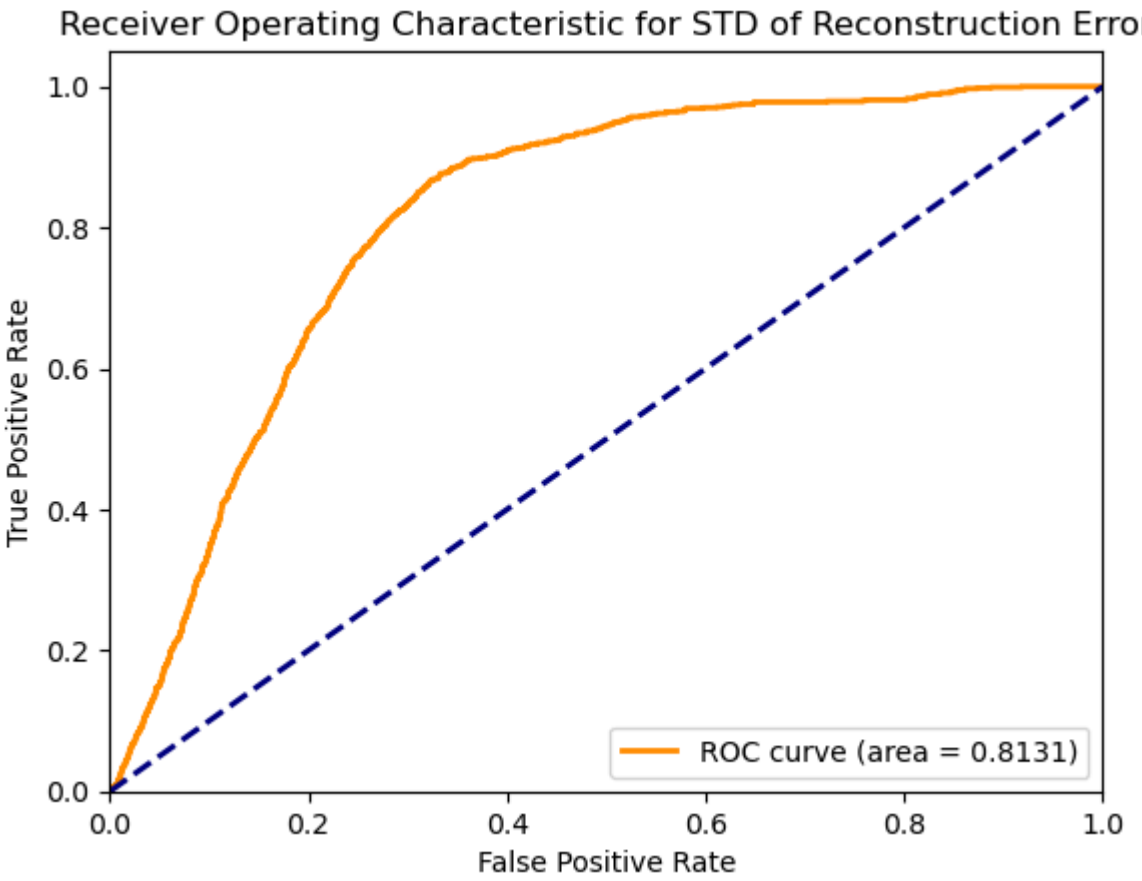
```
----------------------------------
STD Global Classification Results
TPR 0.926, FPR 0.373, Precision 0.036, Recall 0.926
tn 41557, fp 24684, fn 74, tp 925
std_AUROC  0.824
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.837, FPR 0.303, Precision 0.040, Recall 0.837
tn 46146, fp 20095, fn 163, tp 836
mean_AUROC 0.823
----------------------------------
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 0.877, FPR 0.333, Precision 0.038, Recall 0.877
tn 44163, fp 22078, fn 123, tp 876
std_AUROC  0.813
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.889, FPR 0.321, Precision 0.040, Recall 0.889
tn 44956, fp 21285, fn 111, tp 888
mean_AUROC 0.828
----------------------------------
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 0.858, FPR 0.287, Precision 0.043, Recall 0.858
tn 47257, fp 18984, fn 142, tp 857
std_AUROC  0.835
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.848, FPR 0.294, Precision 0.042, Recall 0.848
tn 46778, fp 19463, fn 152, tp 847
mean_AUROC 0.840
----------------------------------
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,
()
```

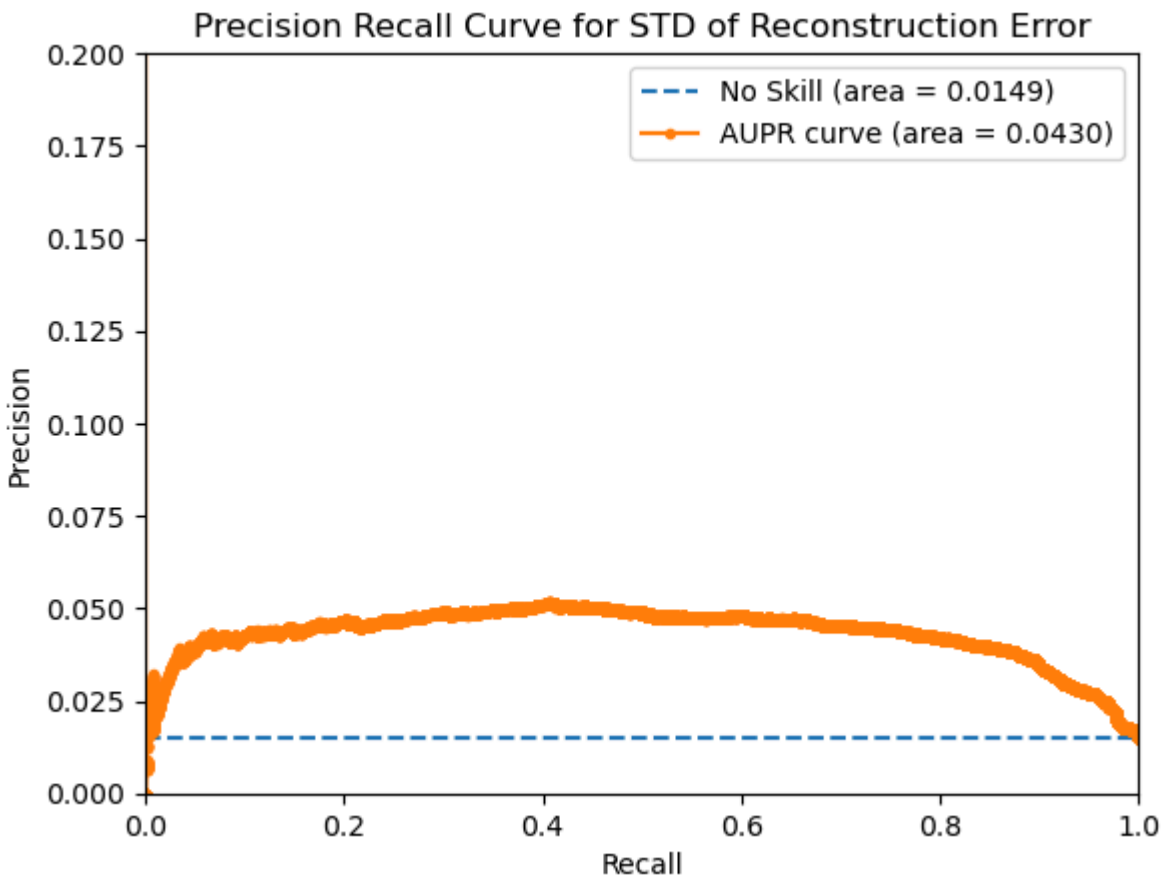

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8236)
0.0
0.2
0.4
0.6
0.8
1.0

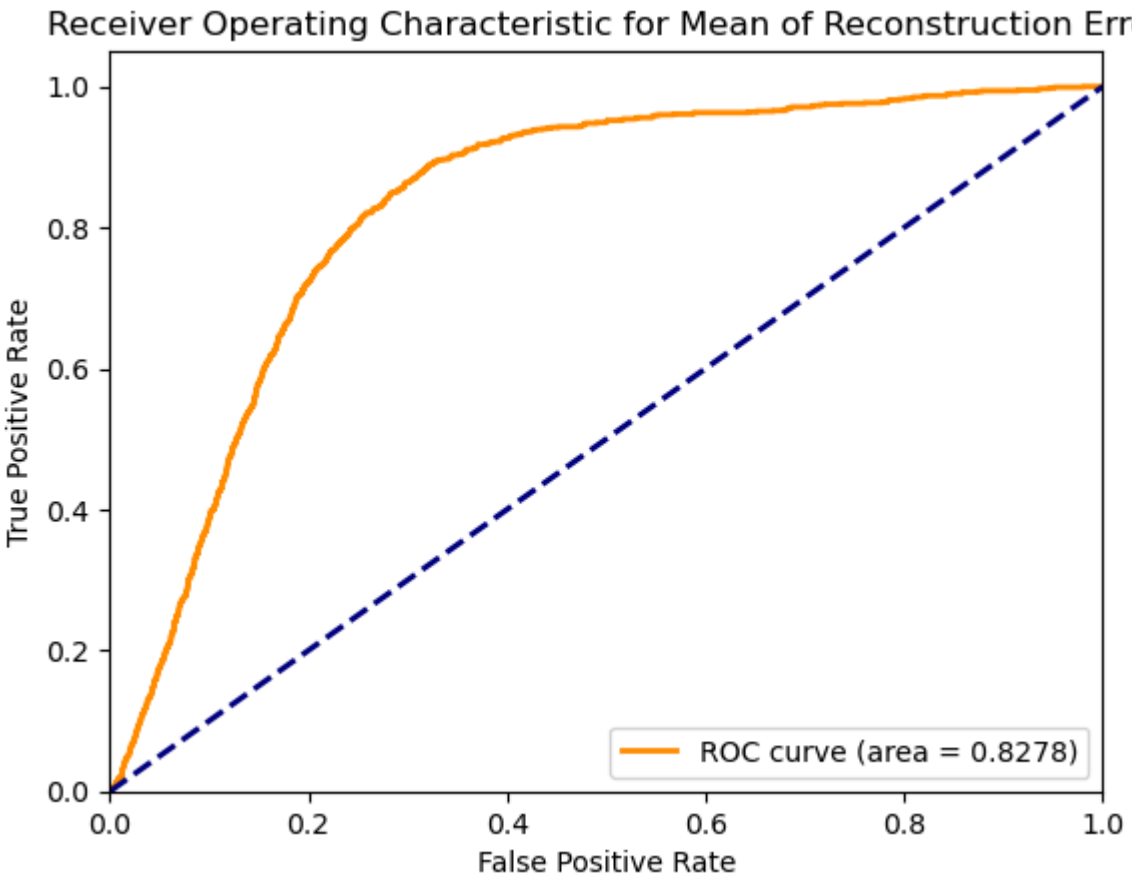

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0149)
AUPR curve (area = 0.0469)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

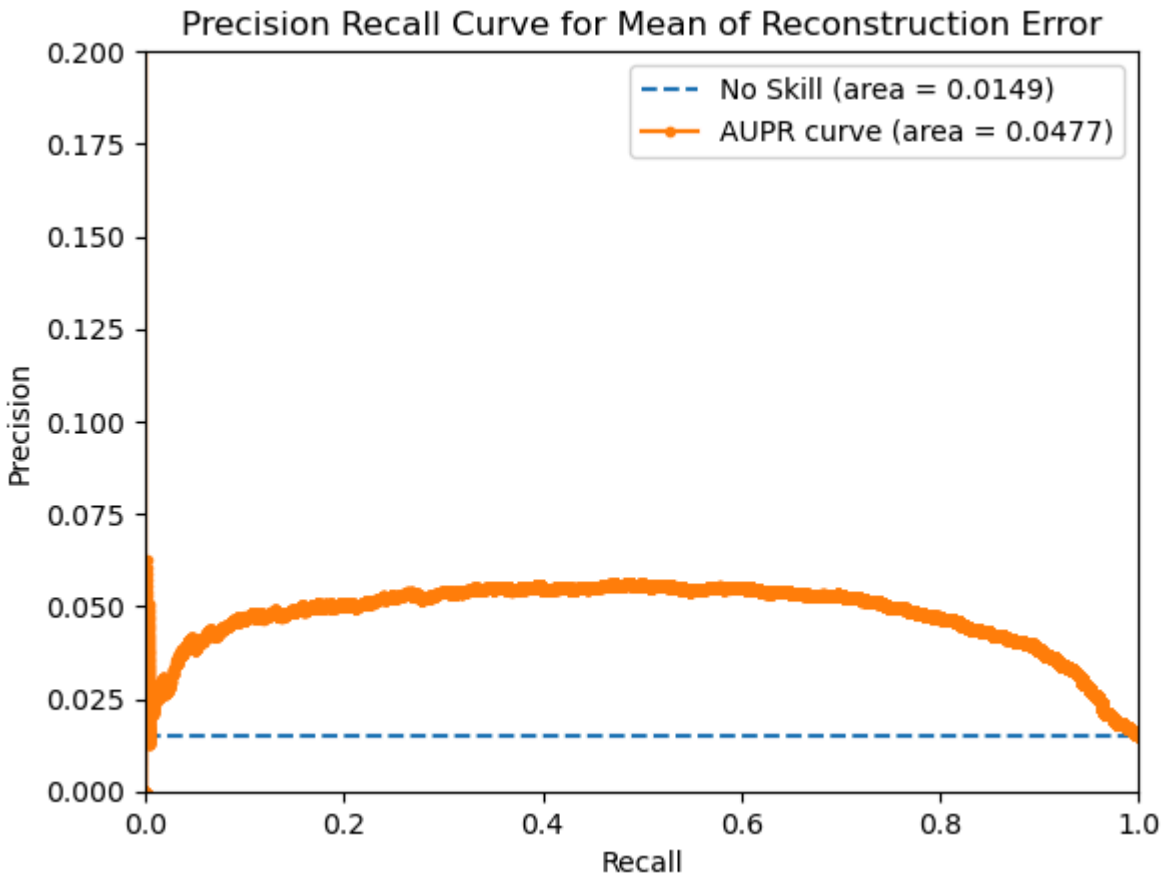

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8234)
0.0
0.2
0.4
0.6
0.8
1.0

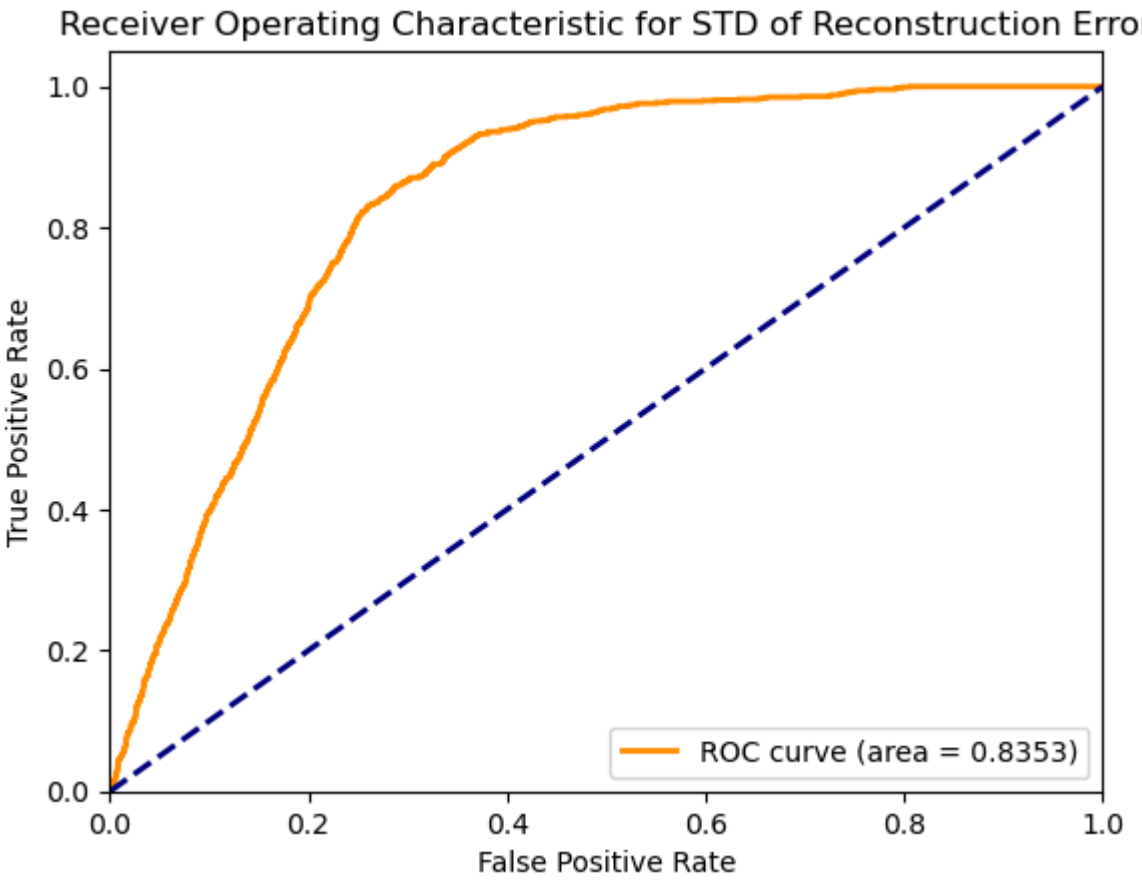

Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0149)
AUPR curve (area = 0.0515)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

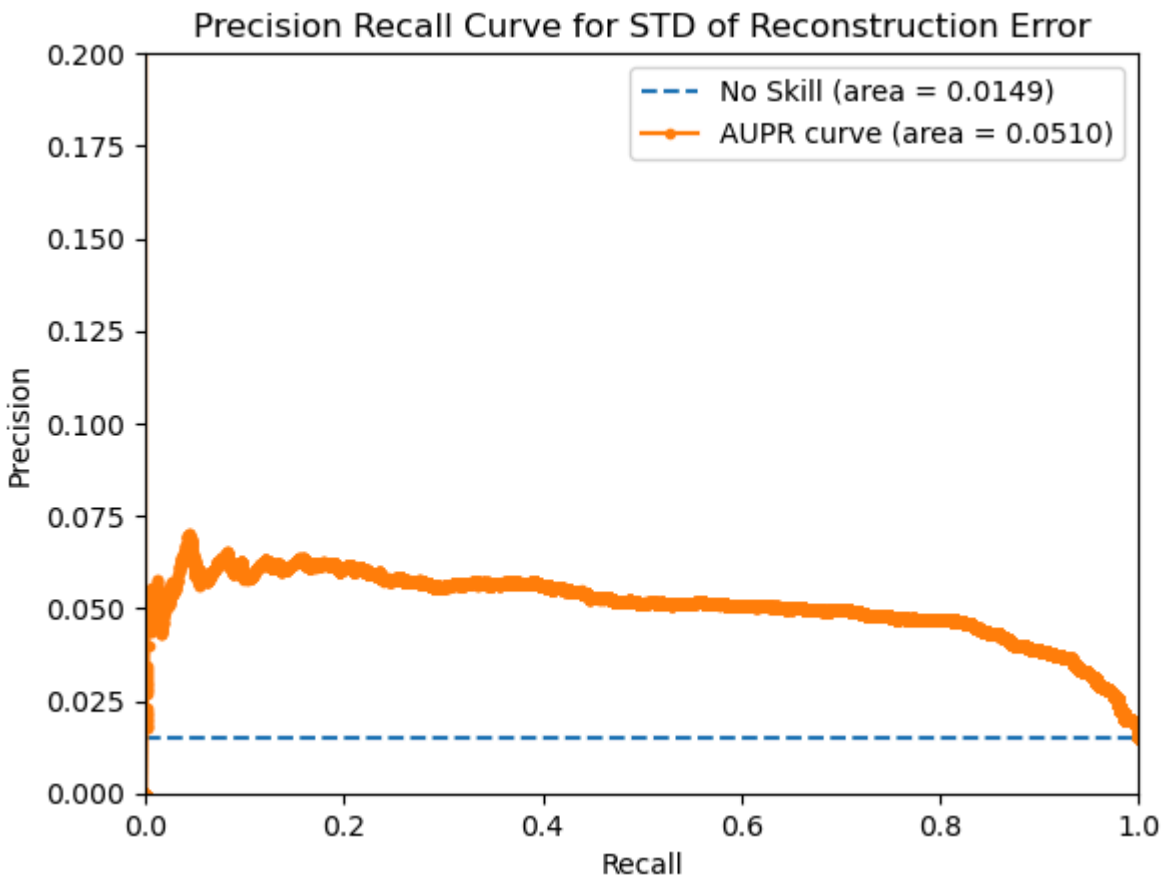

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8131)
0.0
0.2
0.4
0.6
0.8
1.0

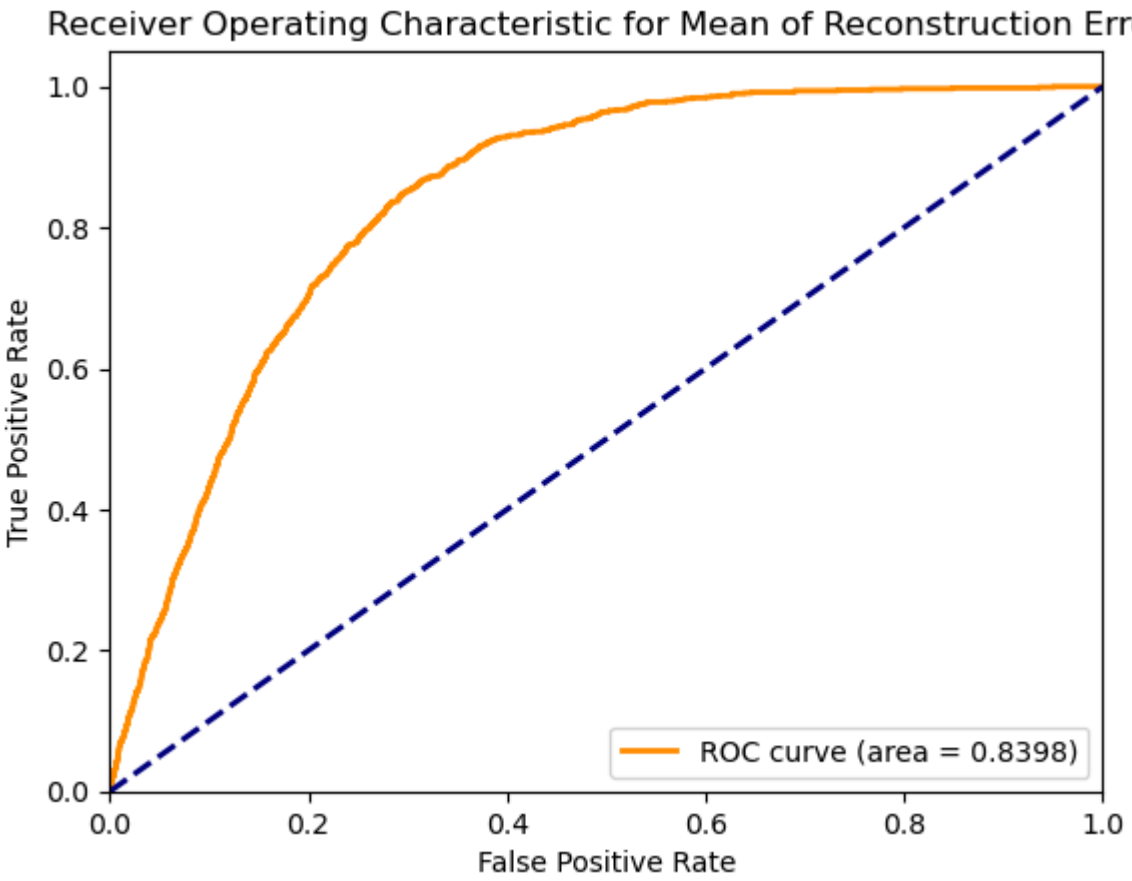

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0149)
AUPR curve (area = 0.0430)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

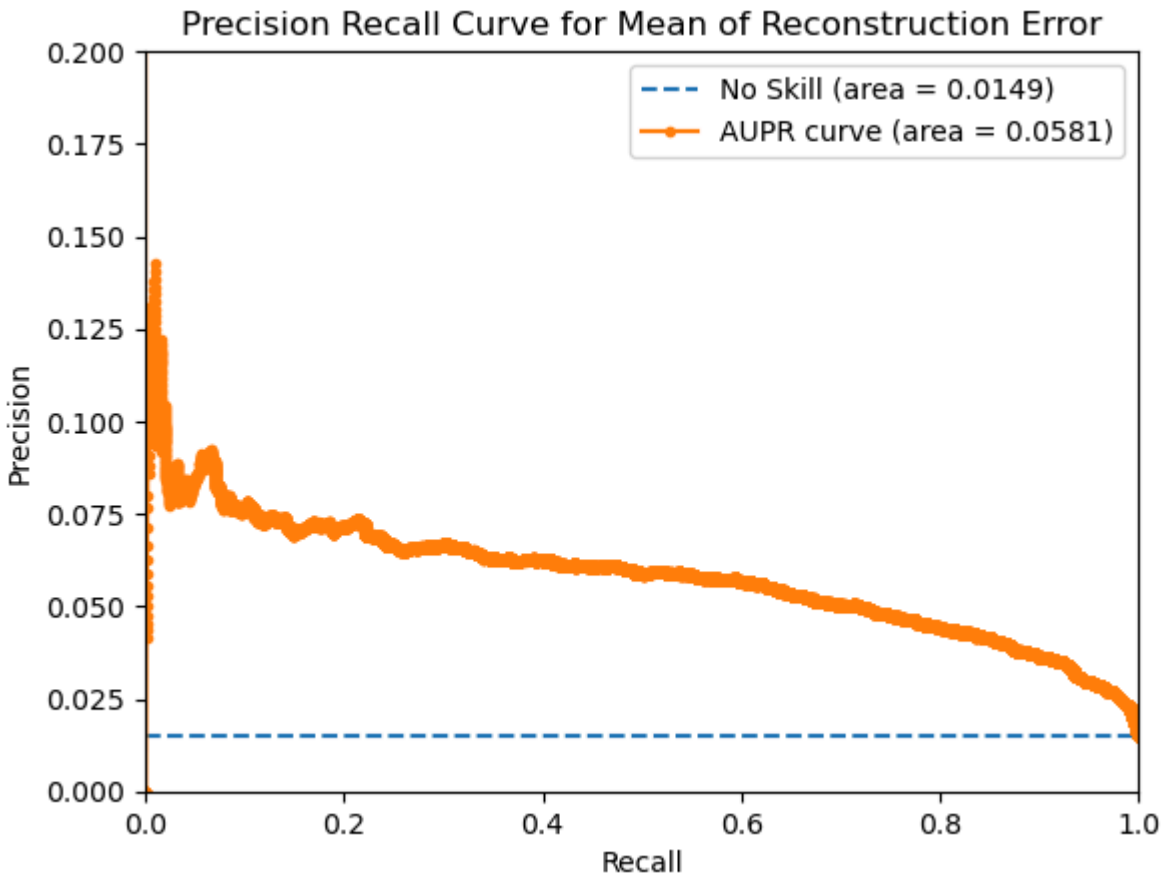

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8278)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0149)
AUPR curve (area = 0.0477)
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 = 0.8353)
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 = 0.0149)
AUPR curve (area = 0.0510)
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 = 0.8398)
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 = 0.0149)
AUPR curve (area = 0.0581)
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