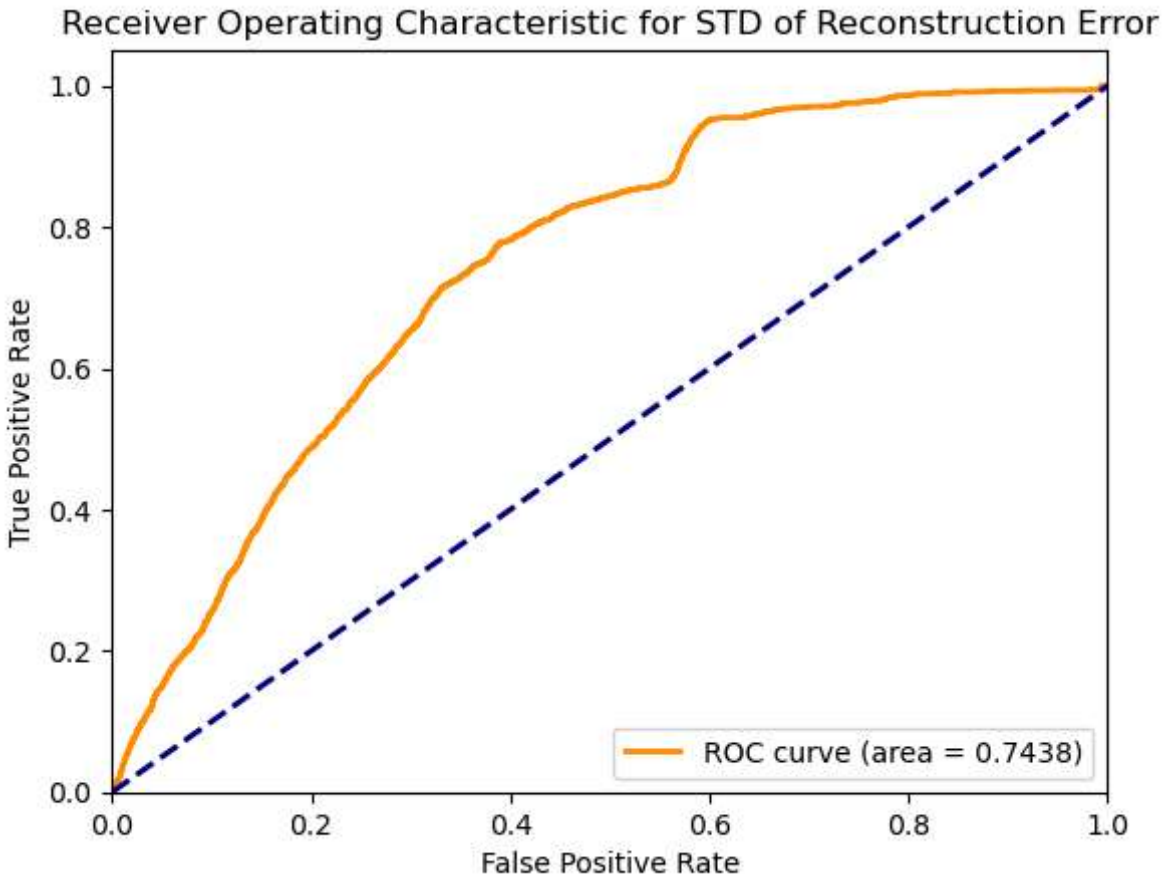
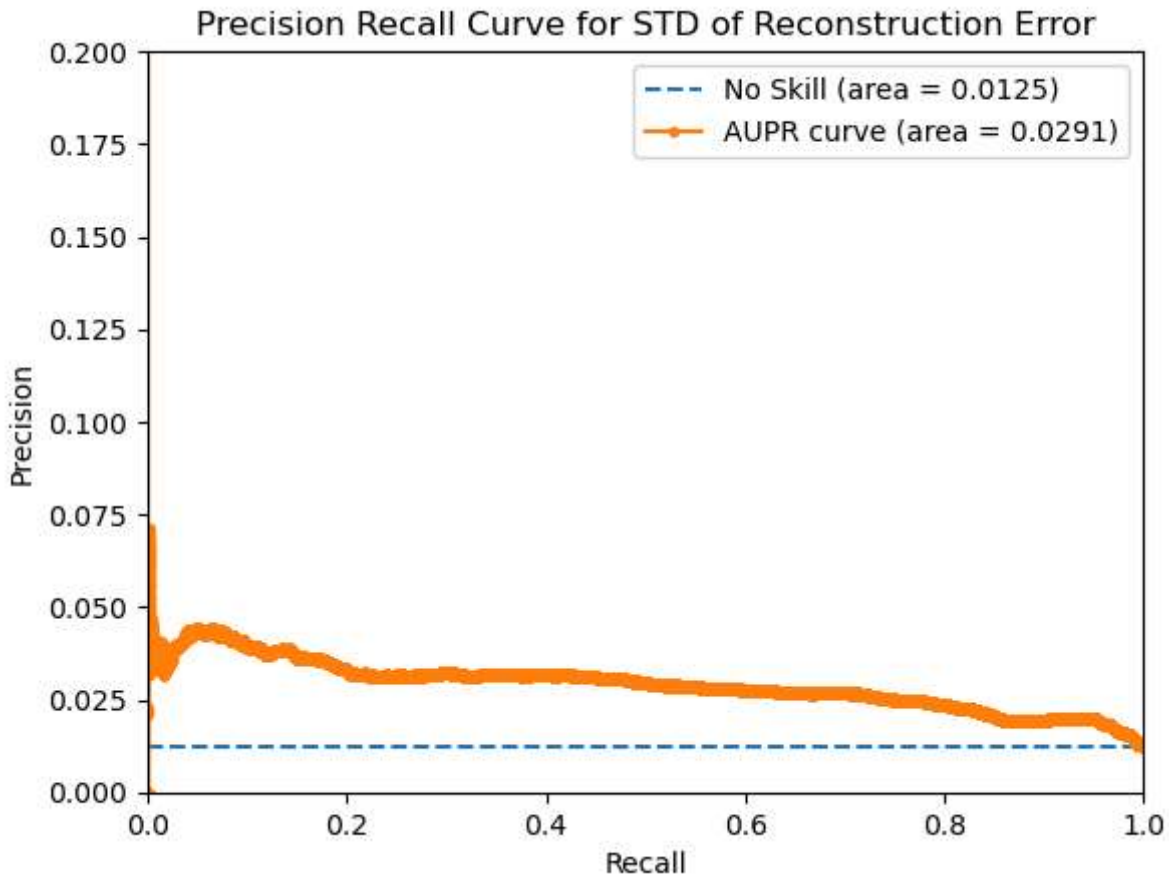
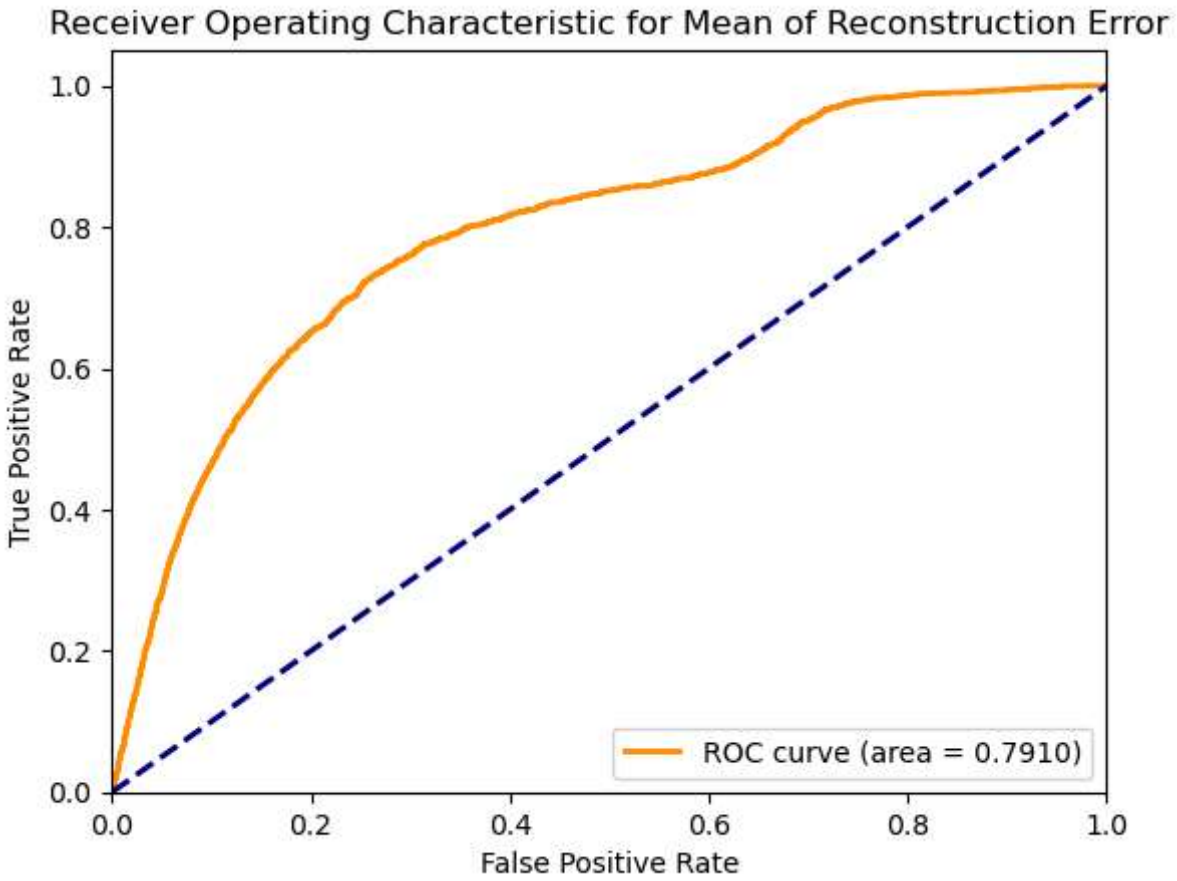
```
Modality 1 - Thermal
Non Falls - 48, Falls - 173

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 - False
Data Augmentation - False
Spatial Temporal Loss - False

Frame rate adjusted dataset - True
Video length adjustment method - Pad Minimum

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:0.0074
epoch [2/20], loss:0.0050
epoch [3/20], loss:0.0043
epoch [4/20], loss:0.0041
epoch [5/20], loss:0.0035
epoch [6/20], loss:0.0035
epoch [7/20], loss:0.0035
epoch [8/20], loss:0.0036
epoch [9/20], loss:0.0040
epoch [10/20], loss:0.0041
epoch [11/20], loss:0.0045
epoch [12/20], loss:0.0038
epoch [13/20], loss:0.0039
epoch [14/20], loss:0.0037
epoch [15/20], loss:0.0036
epoch [16/20], loss:0.0031
epoch [17/20], loss:0.0030
epoch [18/20], loss:0.0028
epoch [19/20], loss:0.0028
epoch [20/20], loss:0.0027
Training has Completed

Forward pass occuring
Forward pass completed
```

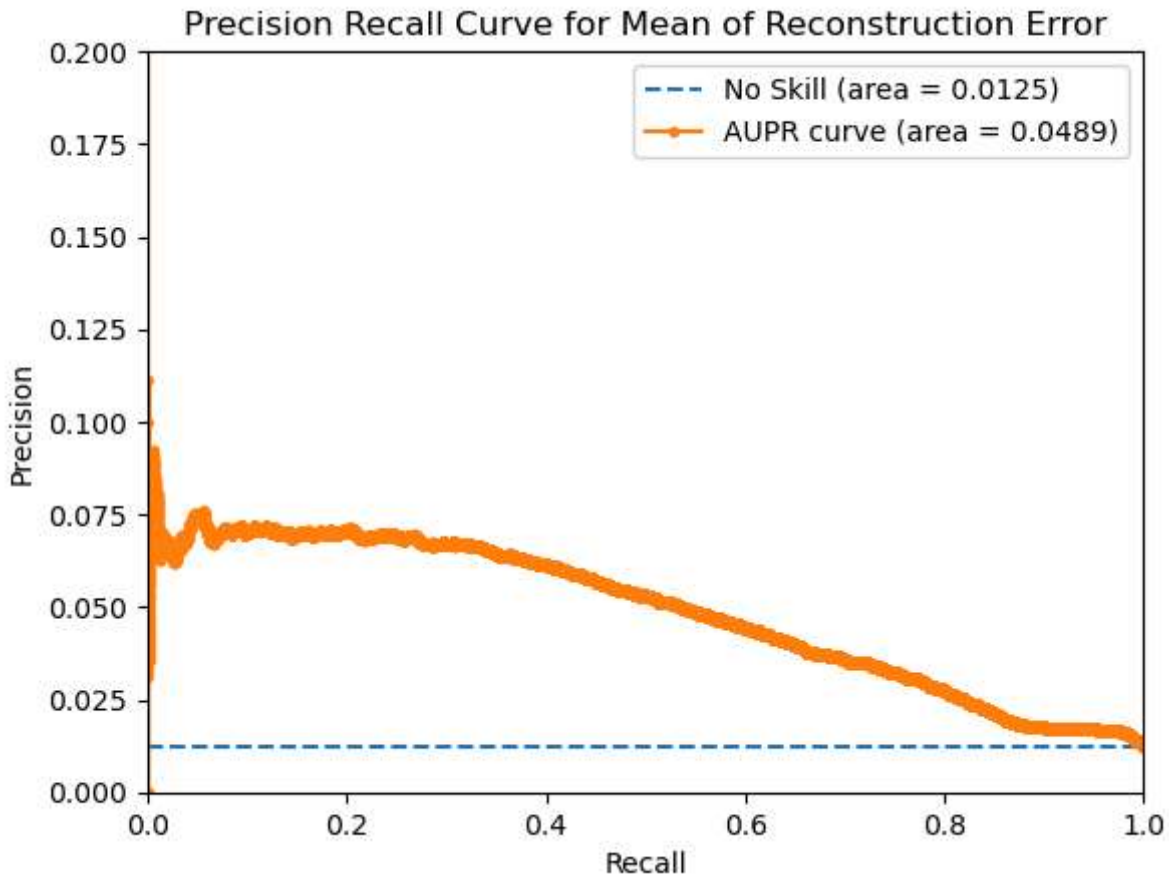
```
MultiModal_Thermal_T3_IP_T_2024-04-15-19-49-44

---------------------------------
STD Global Classification Results
TPR 0.779, FPR 0.391, Precision 0.025, Recall 0.779
tn 113974, fp 73195, fn 525, tp 1849
std_AUROC  0.744
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.732, FPR 0.263, Precision 0.034, Recall 0.732
tn 137917, fp 49252, fn 636, tp 1738
mean_AUROC 0.791
---------------------------------

d:\FYP-Human-Fall-Detection\Code\functions.py:250: RuntimeWarning: Mean of em
pty slice
  final_performance_mean = np.nanmean(video_metrics, axis=0)  # get the mean
performance across all videos
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\na
nfunctions.py:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.
  var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,

---------------------------------
STD Global Classification Results
TPR 0.819, FPR 0.399, Precision 0.017, Recall 0.819
tn 112957, fp 74983, fn 290, tp 1313
std_AUROC  0.795
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.798, FPR 0.215, Precision 0.031, Recall 0.798
tn 147531, fp 40409, fn 324, tp 1279
mean_AUROC 0.865
---------------------------------
```

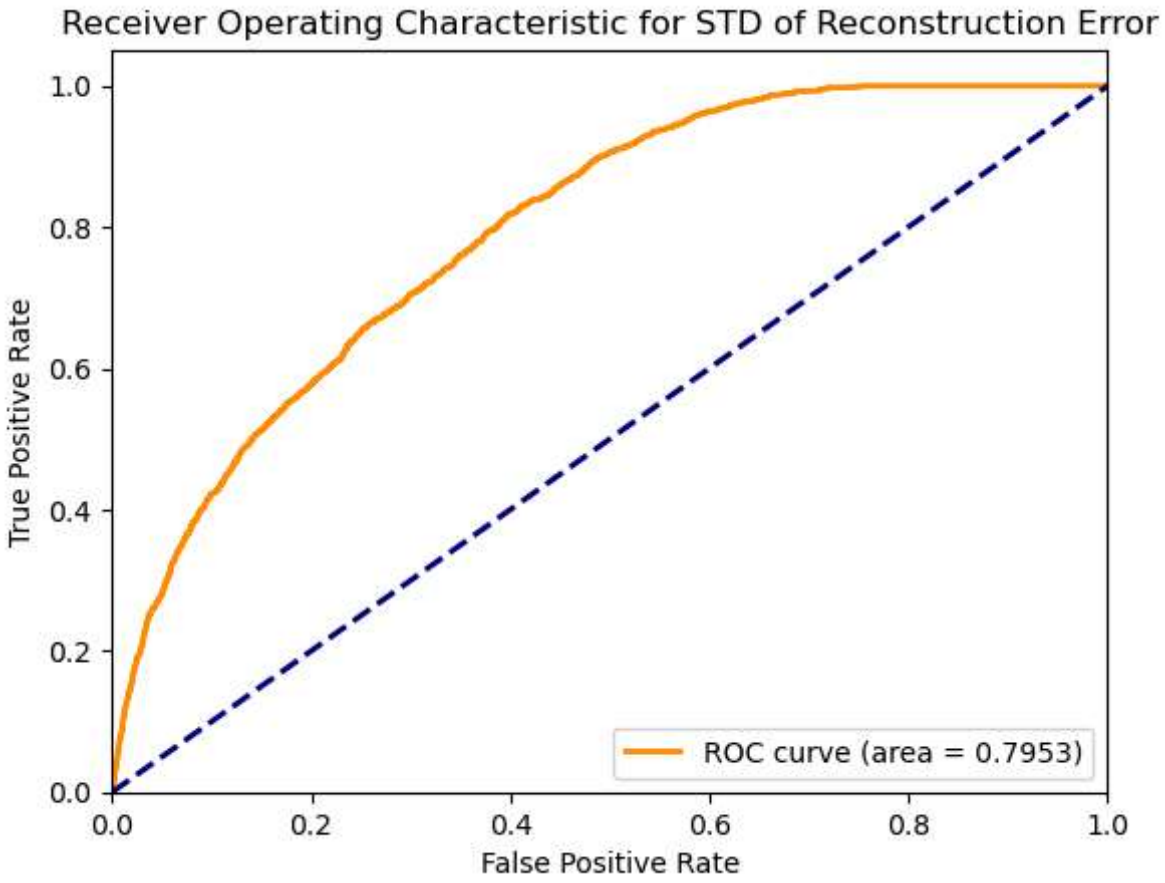
```
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:1132: UndefinedMetricWarning: No positive samples in y_true,
true positive value should be meaningless
  warnings.warn(
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:979: UserWarning: No positive class found in y_true, recall i
s set to one for all thresholds.
  warnings.warn(
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:1132: UndefinedMetricWarning: No positive samples in y_true,
true positive value should be meaningless
  warnings.warn(
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:979: UserWarning: No positive class found in y_true, recall i
s set to one for all thresholds.
  warnings.warn(
d:\FYP-Human-Fall-Detection\Code\functions.py:250: RuntimeWarning: Mean of em
pty slice
  final_performance_mean = np.nanmean(video_metrics, axis=0)  # get the mean
performance across all videos
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\na
nfunctions.py:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.
  var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,

---------------------------------
STD Global Classification Results
TPR 0.810, FPR 0.419, Precision 0.024, Recall 0.810
tn 108801, fp 78368, fn 450, tp 1924
std_AUROC  0.730
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.737, FPR 0.348, Precision 0.026, Recall 0.737
tn 121954, fp 65215, fn 624, tp 1750
mean_AUROC 0.761
---------------------------------

d:\FYP-Human-Fall-Detection\Code\functions.py:250: RuntimeWarning: Mean of em
pty slice
  final_performance_mean = np.nanmean(video_metrics, axis=0)  # get the mean
performance across all videos
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\na
nfunctions.py:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.
  var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,

()
```

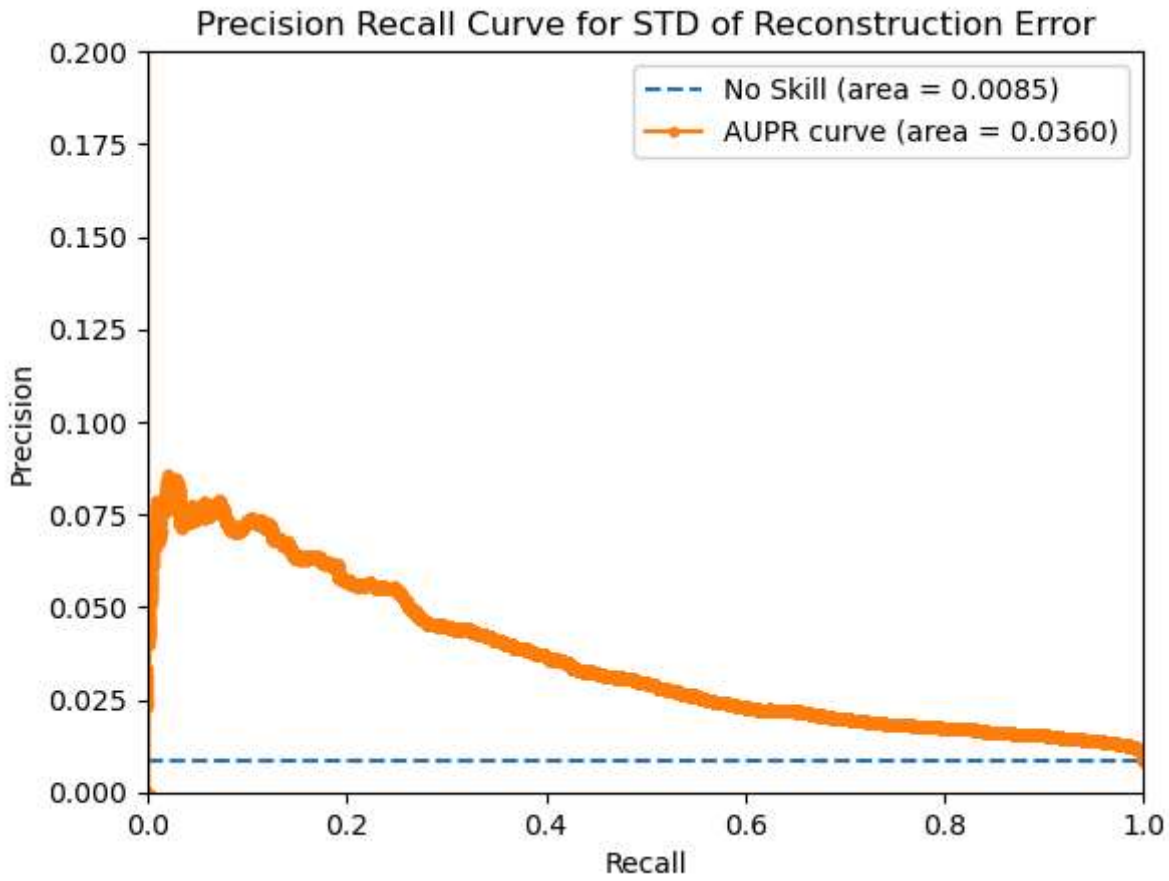

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.7438)
0.0
0.2
0.4
0.6
0.8
1.0

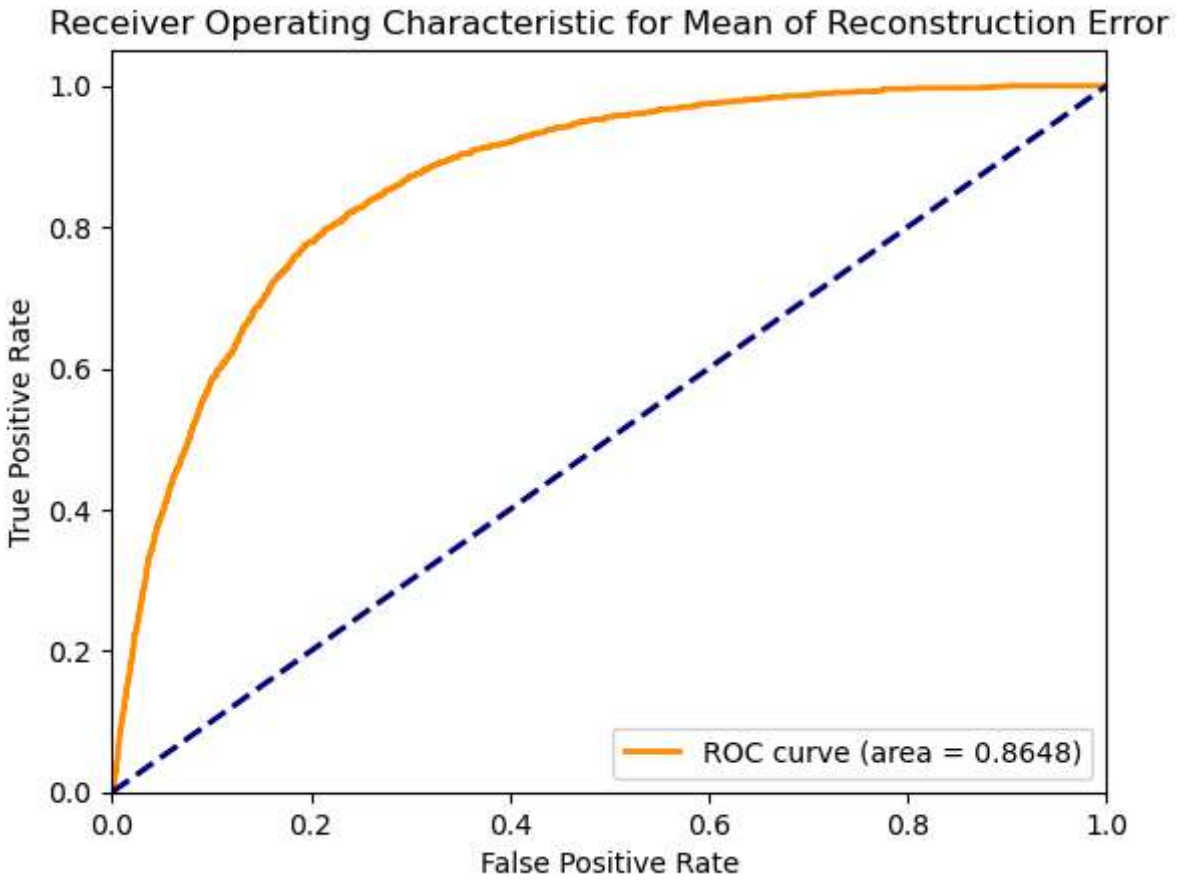

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0125)
AUPR curve (area = 0.0291)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

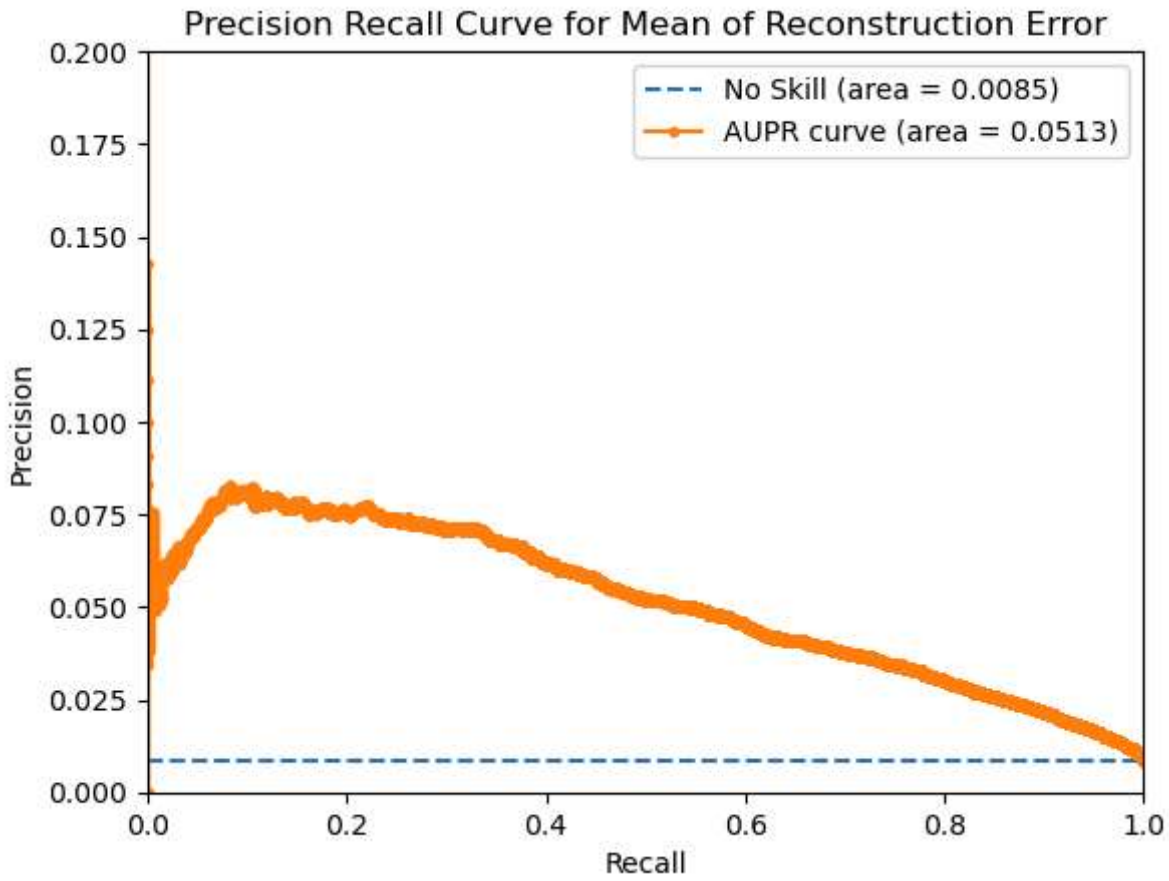

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.7910)
0.0
0.2
0.4
0.6
0.8
1.0

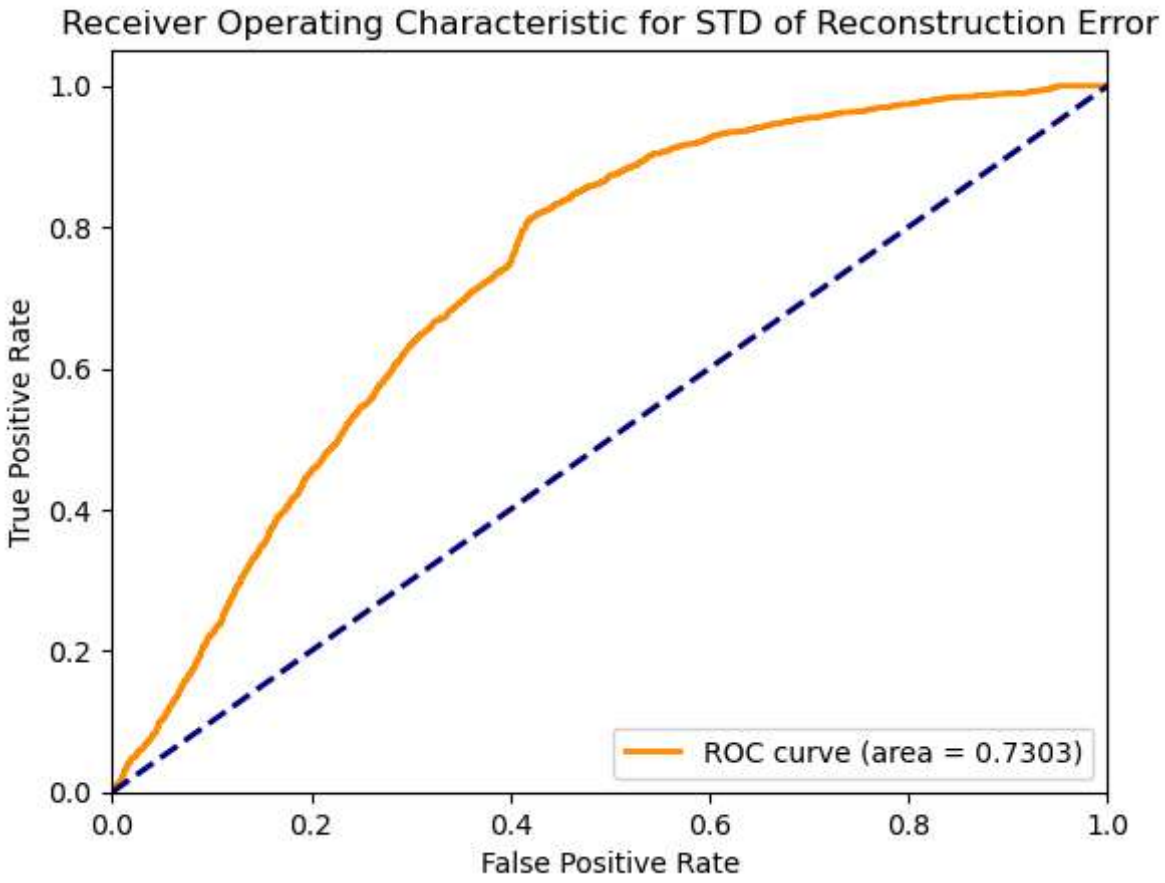

Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0125)
AUPR curve (area = 0.0489)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

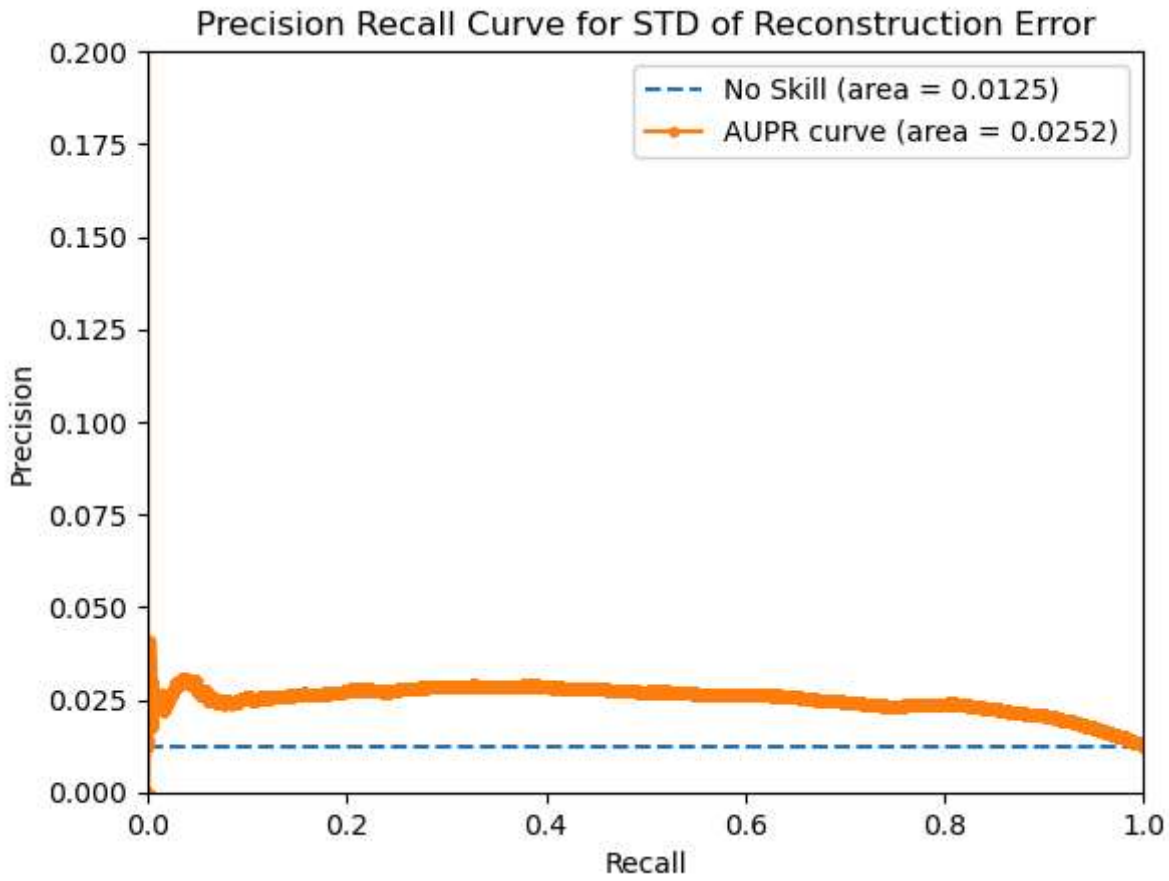

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.7953)
0.0
0.2
0.4
0.6
0.8
1.0

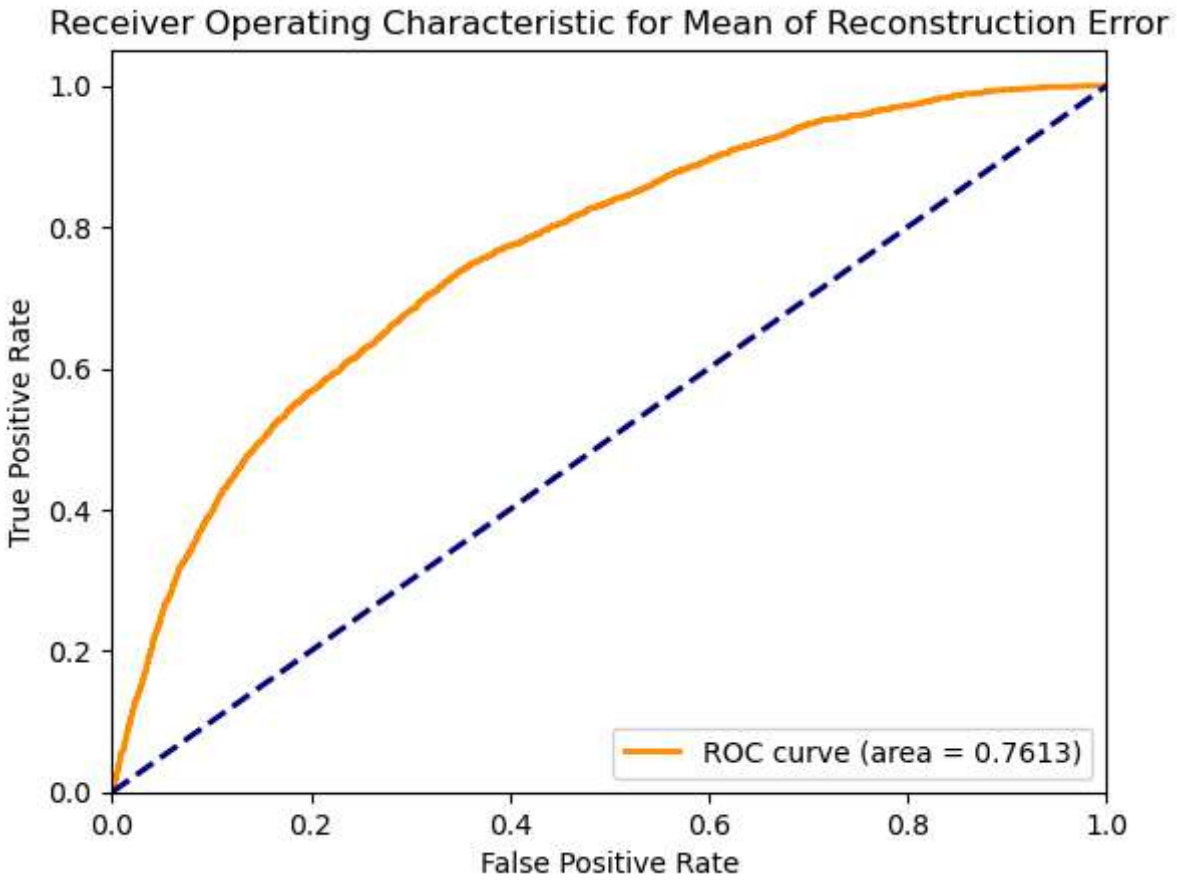

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0085)
AUPR curve (area = 0.0360)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

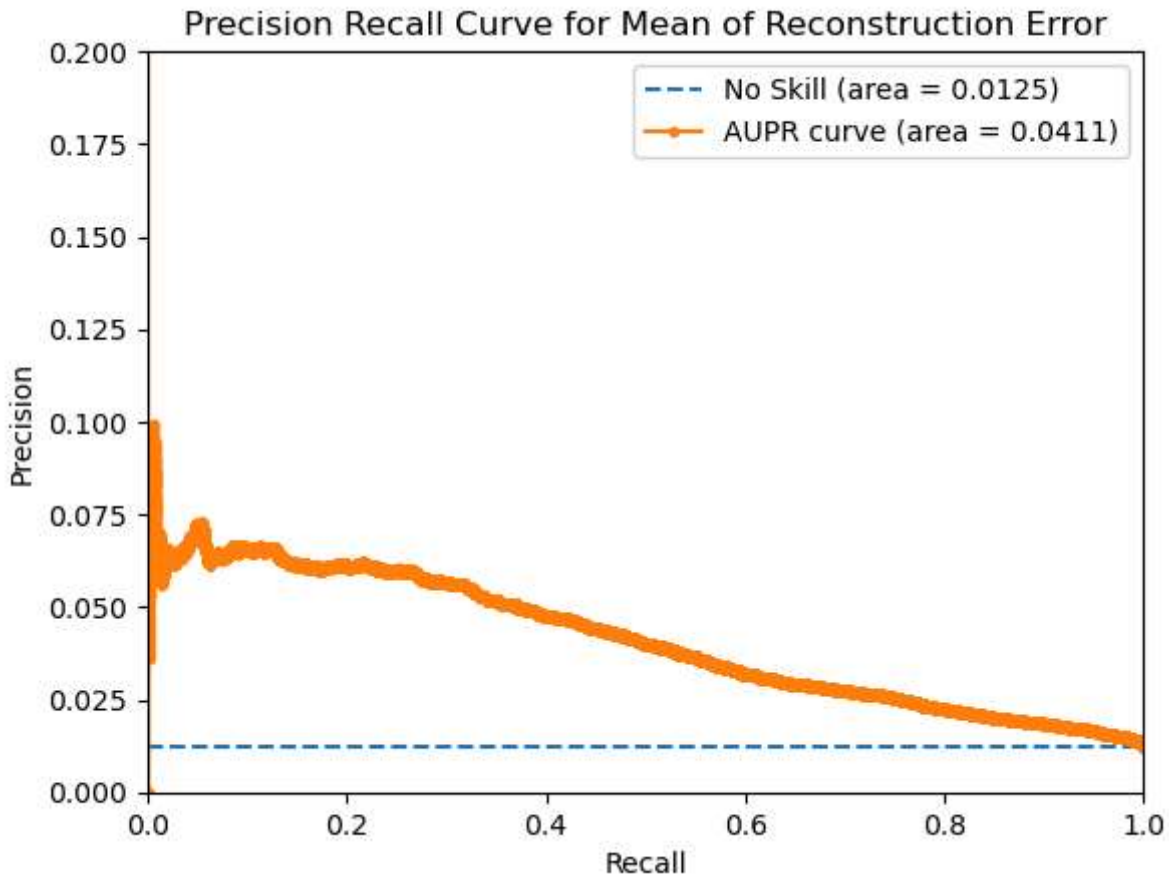

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8648)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0085)
AUPR curve (area = 0.0513)
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 = 0.7303)
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 = 0.0125)
AUPR curve (area = 0.0252)
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 = 0.7613)
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 = 0.0125)
AUPR curve (area = 0.0411)
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