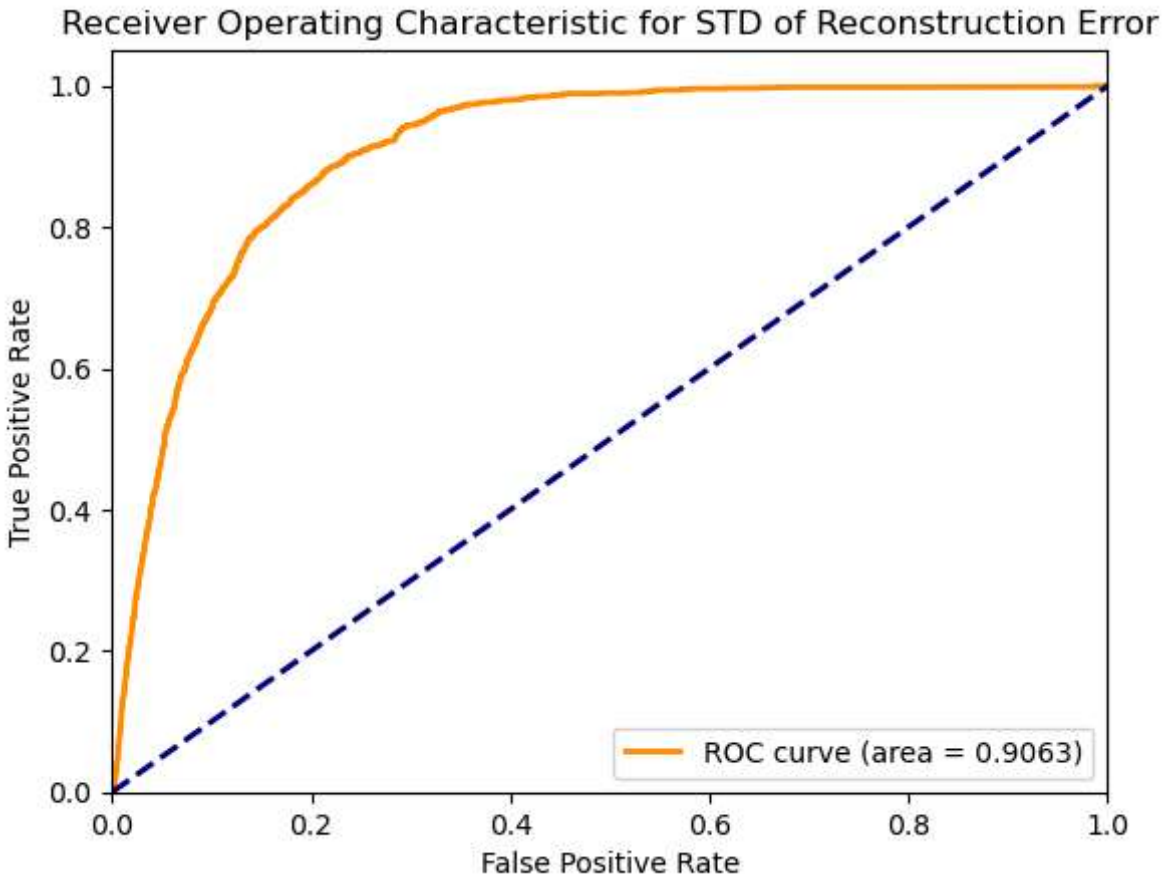
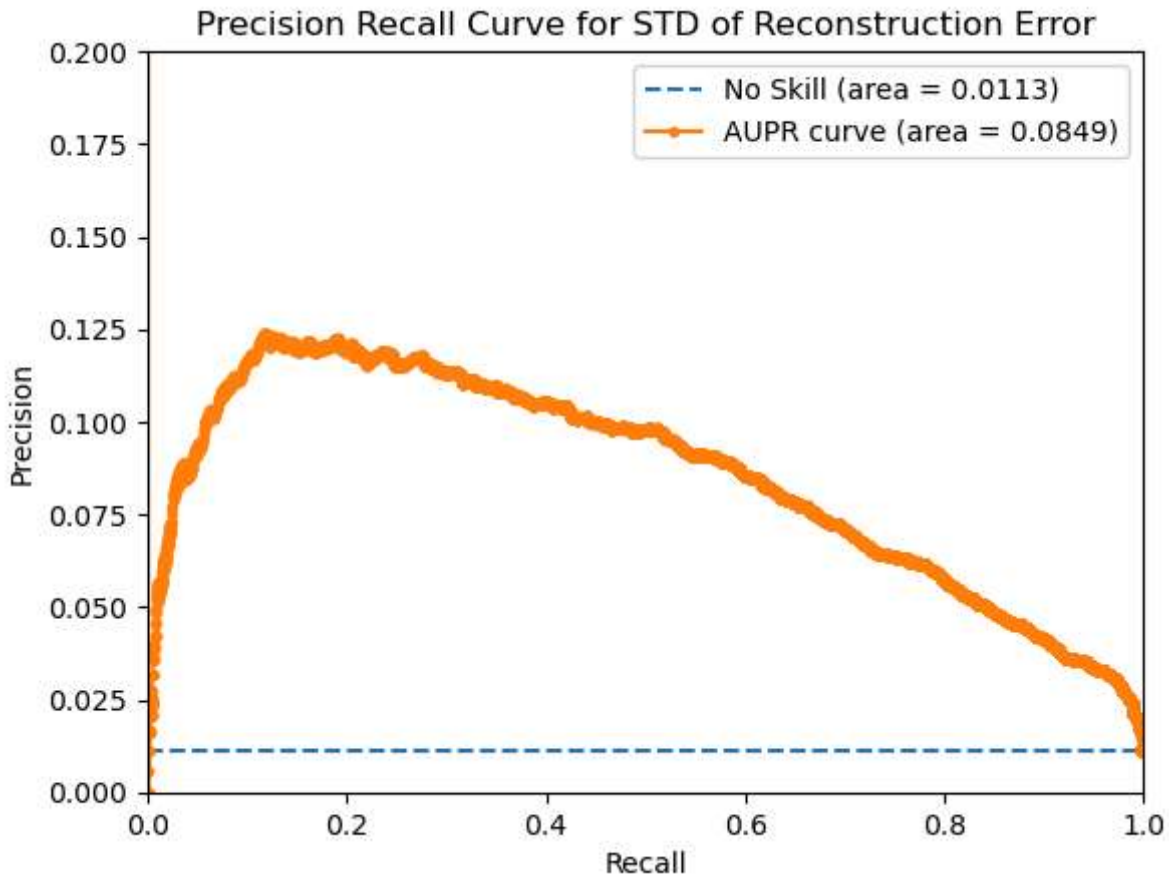
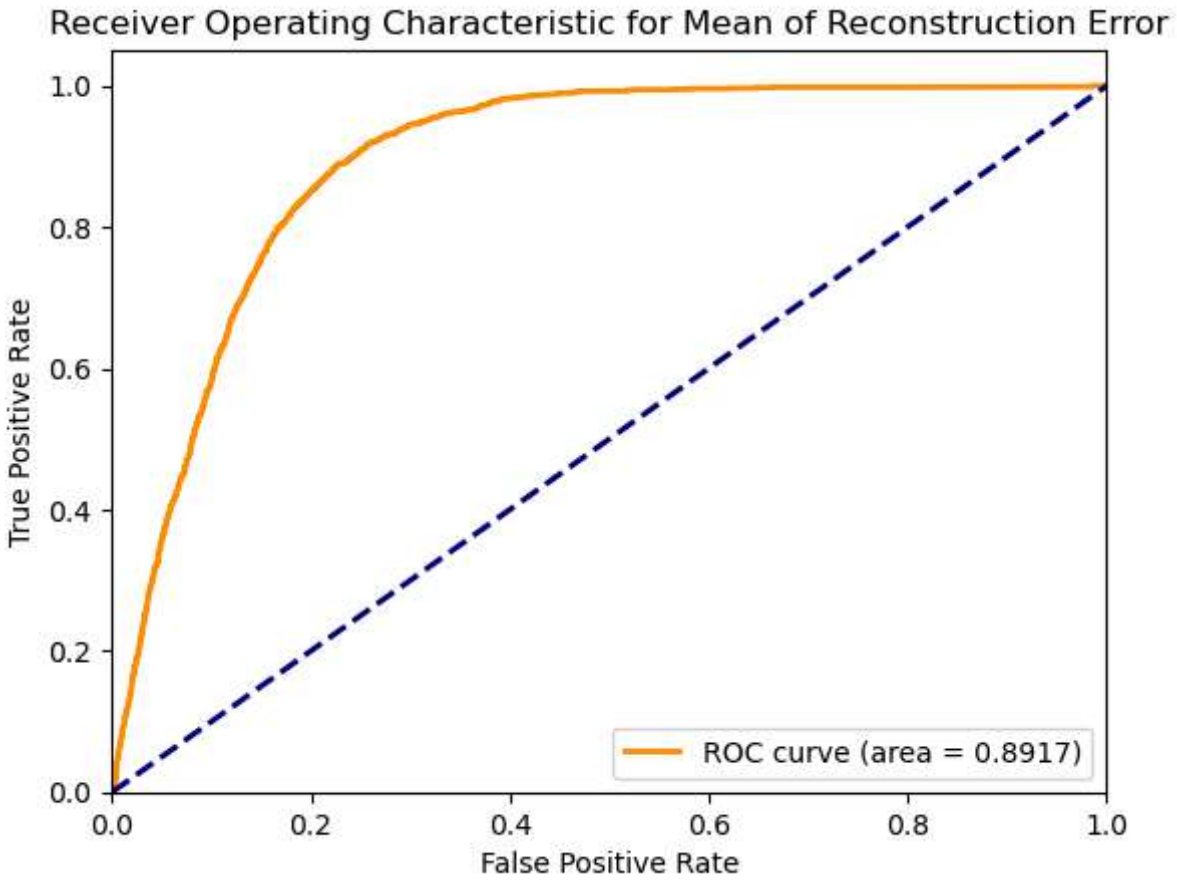
```
Modality 1 - Thermal
Non Falls - 48, Falls - 173

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

Train Dataloader - 48
Test Dataloader - 173

Device Used - cuda

Model Used - EarlyConcatenation_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:0.0074
epoch [2/20], loss:0.0043
epoch [3/20], loss:0.0020
epoch [4/20], loss:0.0008
epoch [5/20], loss:0.0002
epoch [6/20], loss:0.0001
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
```

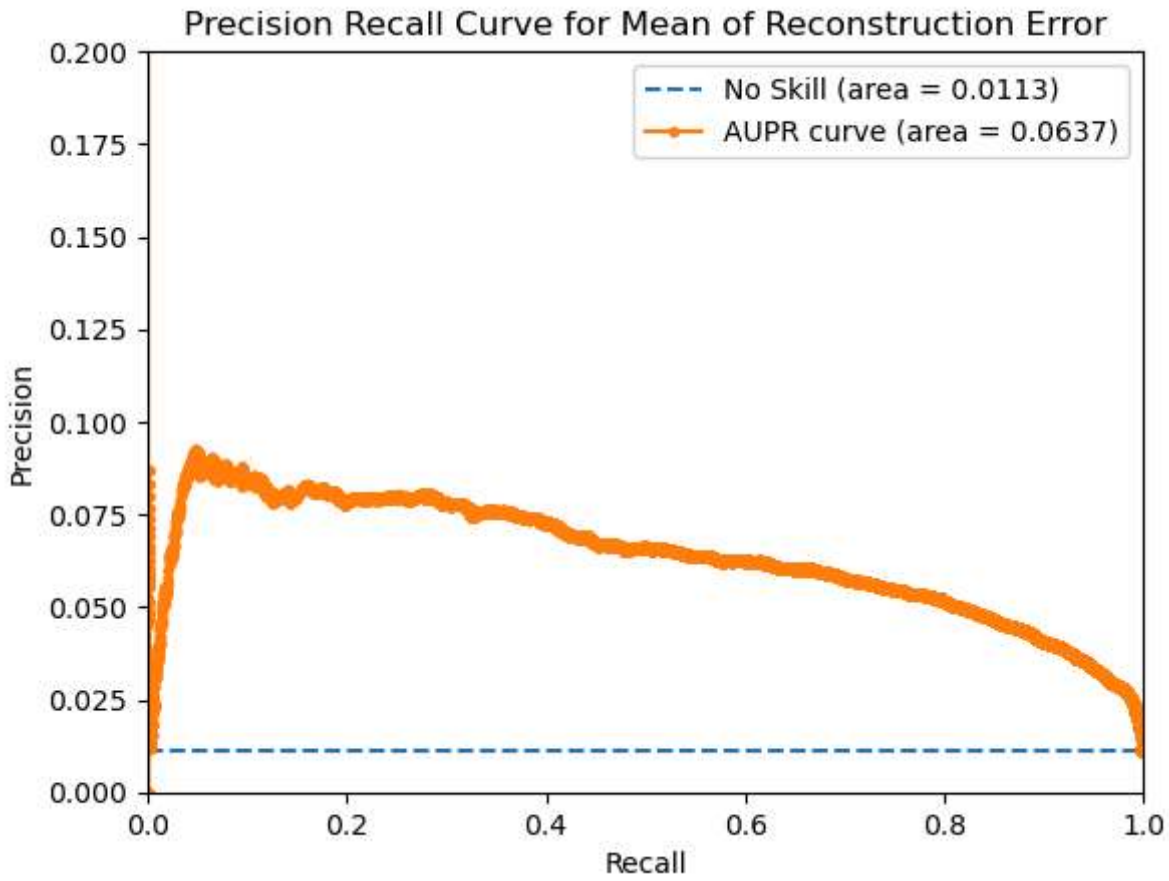
```
Forward pass occuring
Forward pass completed

MultiModal_Thermal_T3_IP_T_2024-04-18-17-30-38

---------------------------------
STD Global Classification Results
TPR 0.885, FPR 0.220, Precision 0.044, Recall 0.885
tn 99515, fp 28012, fn 167, tp 1291
std_AUROC  0.906
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.889, FPR 0.227, Precision 0.043, Recall 0.889
tn 98577, fp 28950, fn 162, tp 1296
mean_AUROC 0.892
---------------------------------

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 0.865, FPR 0.185, Precision 0.050, Recall 0.865
tn 103959, fp 23578, fn 195, tp 1253
std_AUROC  0.905
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.884, FPR 0.257, Precision 0.038, Recall 0.884
tn 94759, fp 32778, fn 168, tp 1280
mean_AUROC 0.869
---------------------------------
```

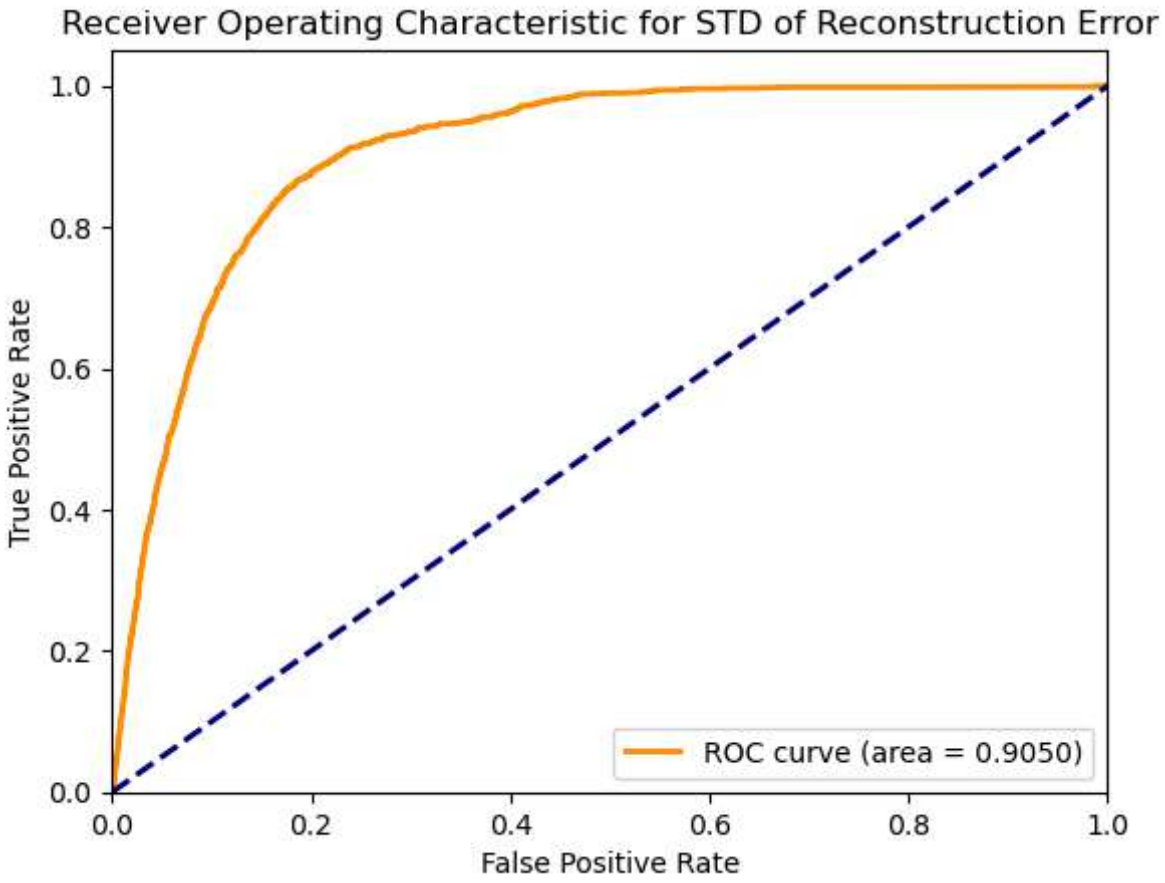
```
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:1132: UndefinedMetricWarning: No positive samples in y_true,
true positive value should be meaningless
  warnings.warn(
c:\Users\sindh\anaconda3\envs\fyp_base_paper_2\lib\site-packages\sklearn\metr
ics\_ranking.py:979: 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 0.866, FPR 0.168, Precision 0.056, Recall 0.866
tn 106117, fp 21410, fn 196, tp 1262
std_AUROC  0.921
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.923, FPR 0.279, Precision 0.036, Recall 0.923
tn 91911, fp 35616, fn 112, tp 1346
mean_AUROC 0.884
---------------------------------

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,

()
```

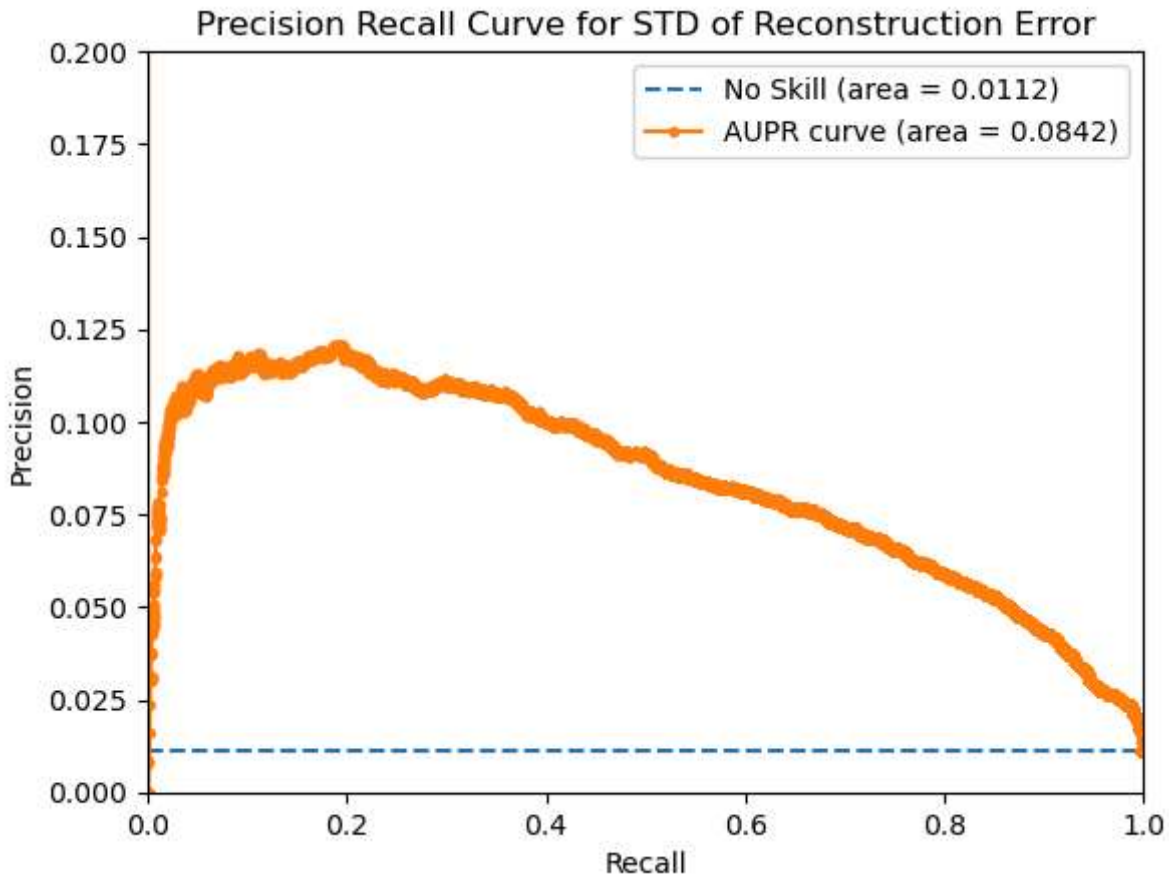

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.9063)
0.0
0.2
0.4
0.6
0.8
1.0

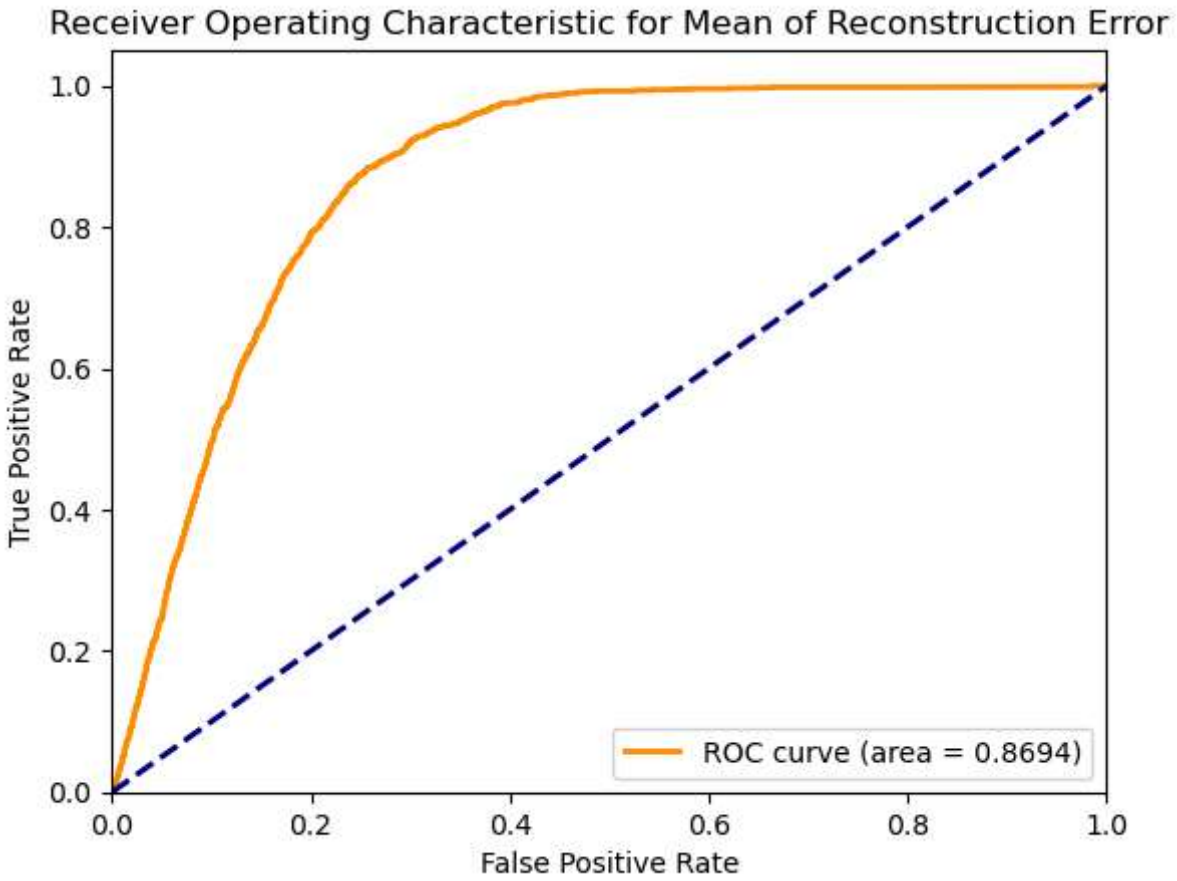

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0113)
AUPR curve (area = 0.0849)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

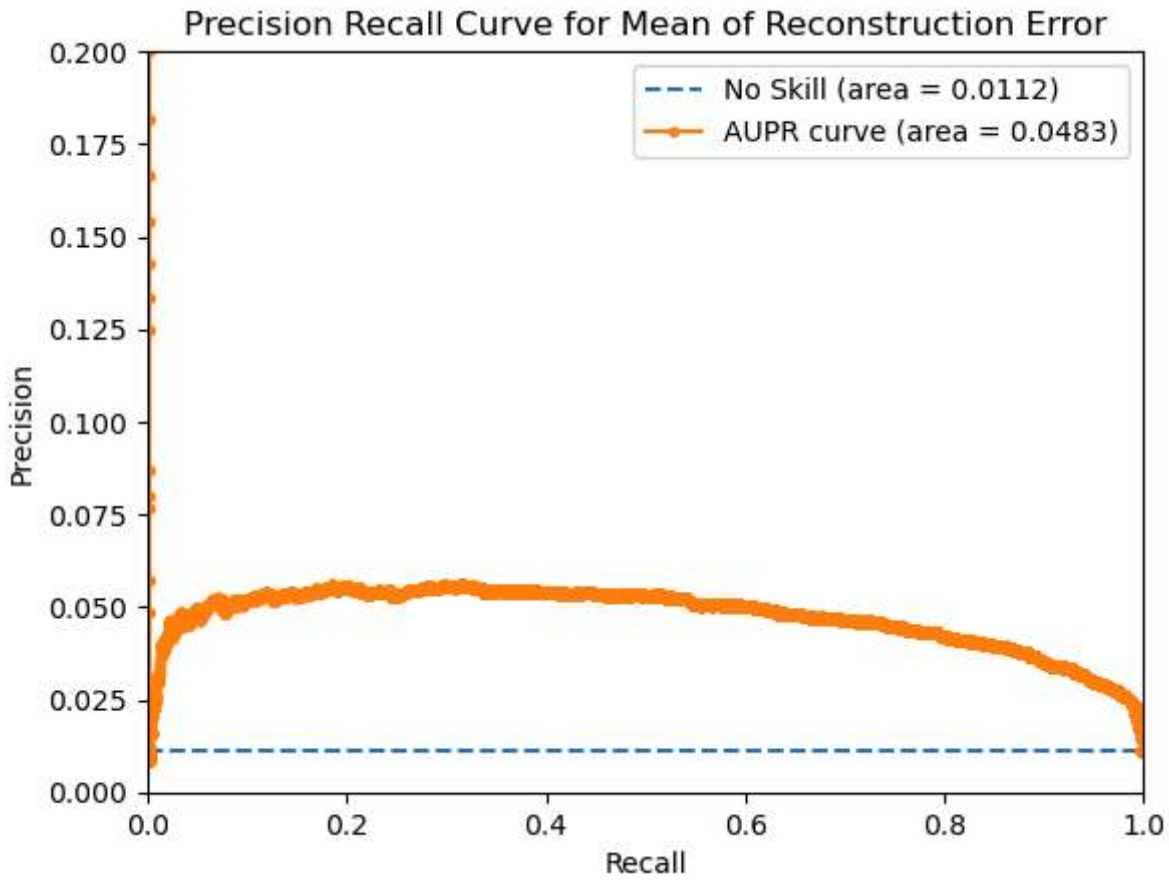

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8917)
0.0
0.2
0.4
0.6
0.8
1.0

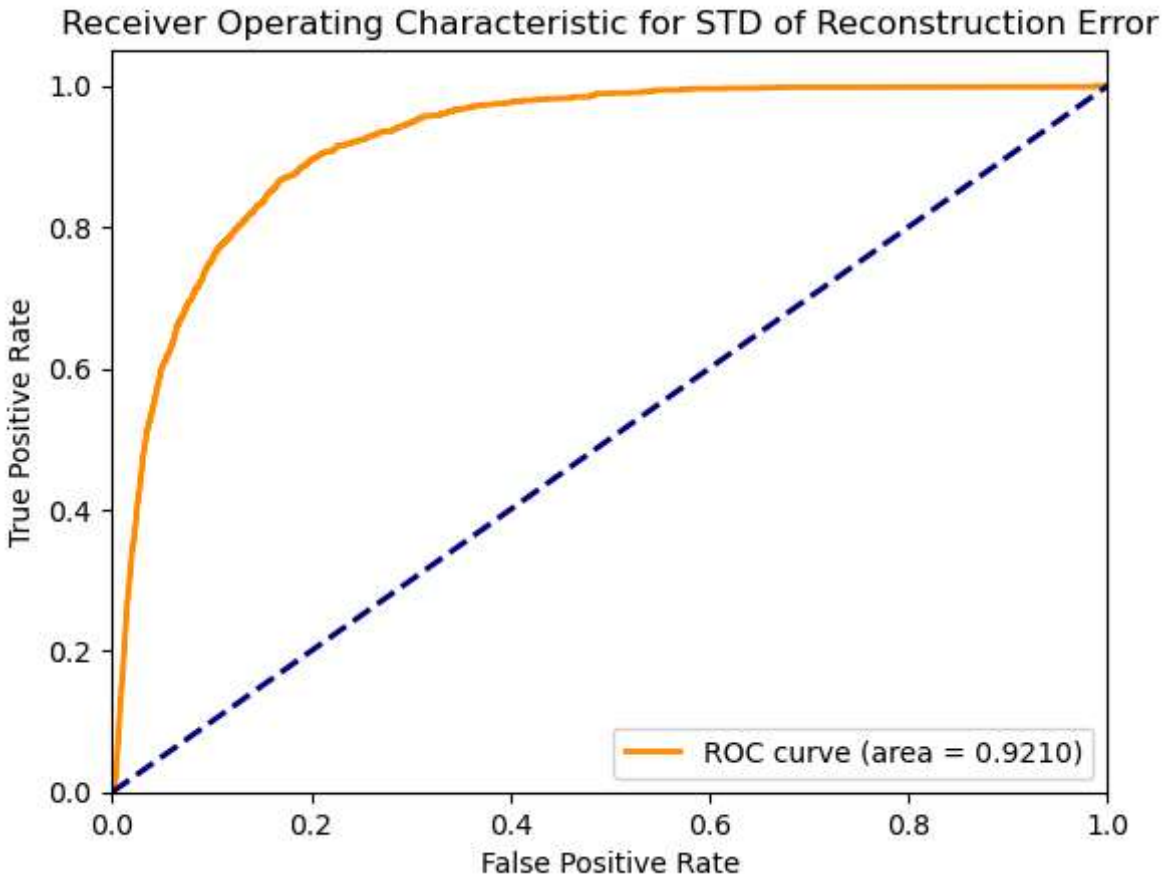

Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0113)
AUPR curve (area = 0.0637)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

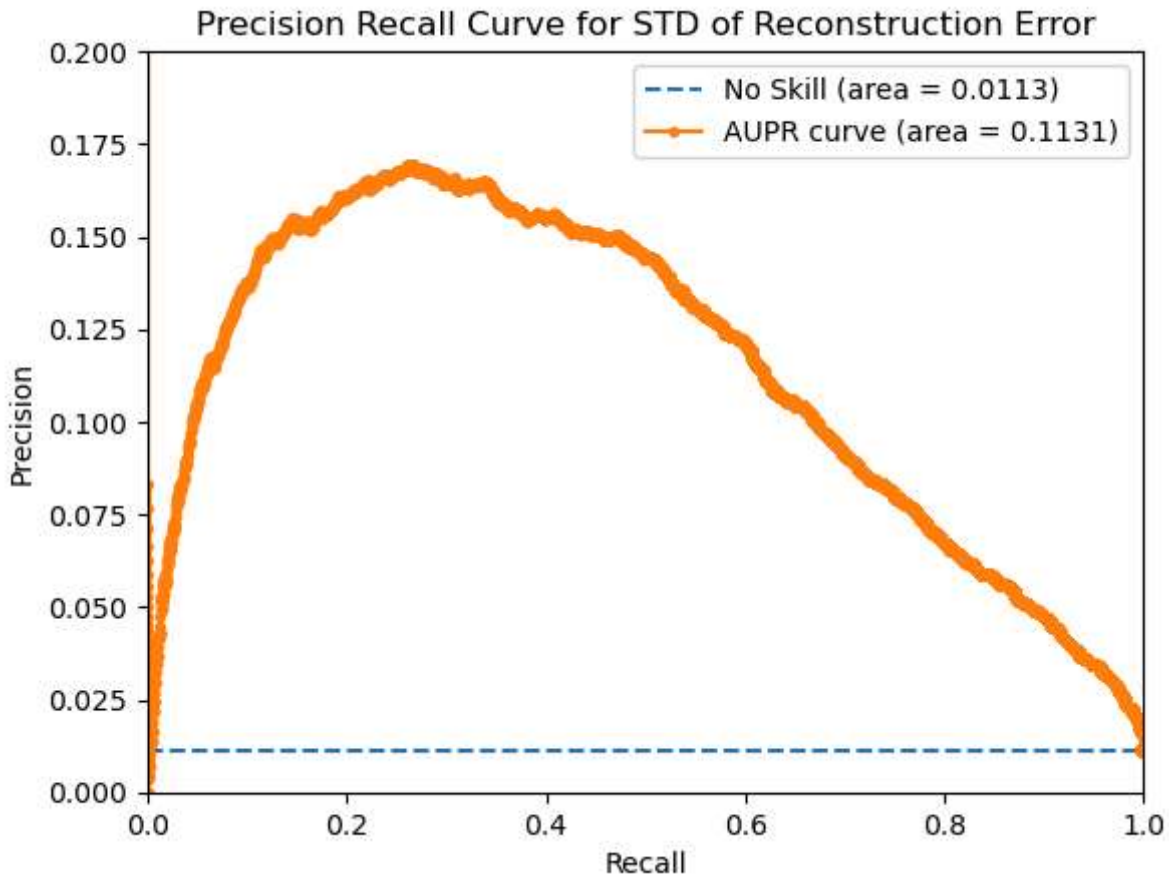

Receiver Operating Characteristic for STD of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.9050)
0.0
0.2
0.4
0.6
0.8
1.0

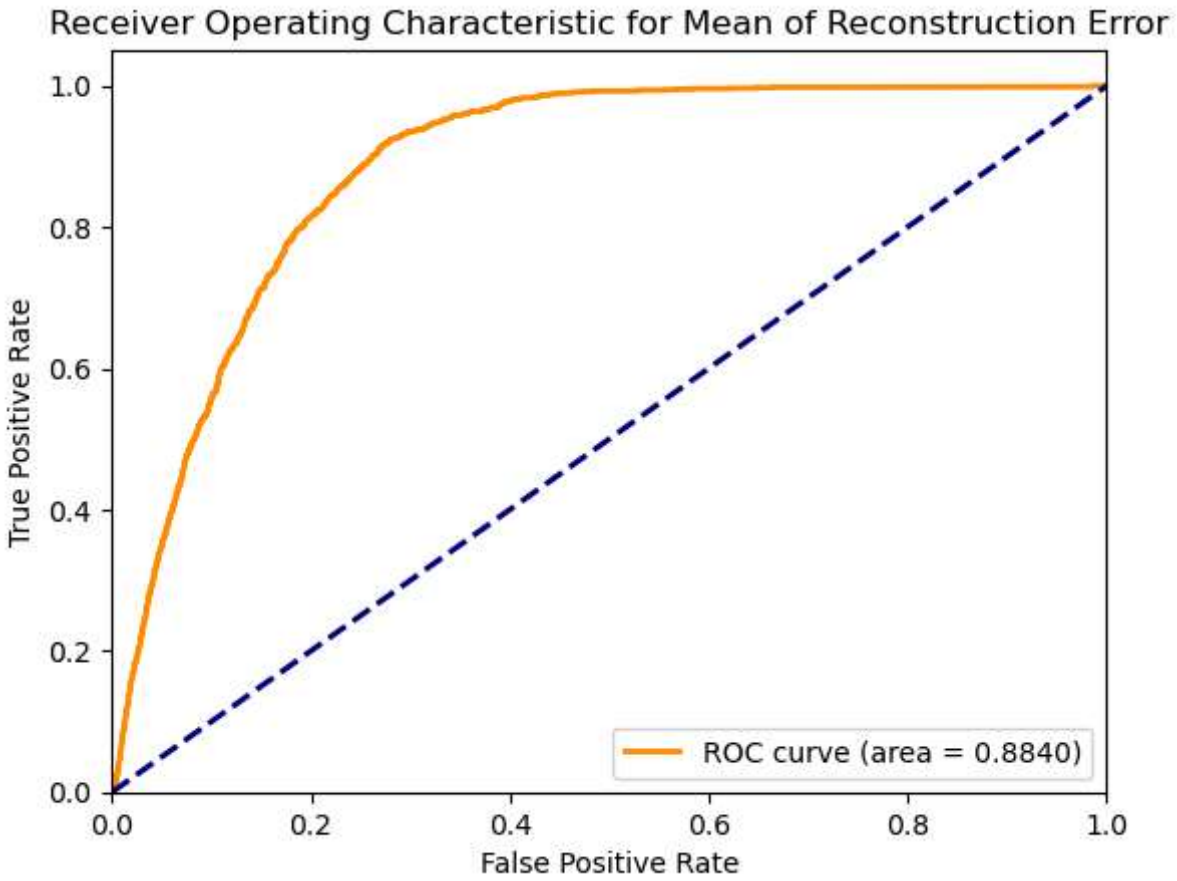

Precision Recall Curve for STD of Reconstruction Error
Precision
Recall
No Skill (area = 0.0112)
AUPR curve (area = 0.0842)
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
0.0
0.2
0.4
0.6
0.8
1.0

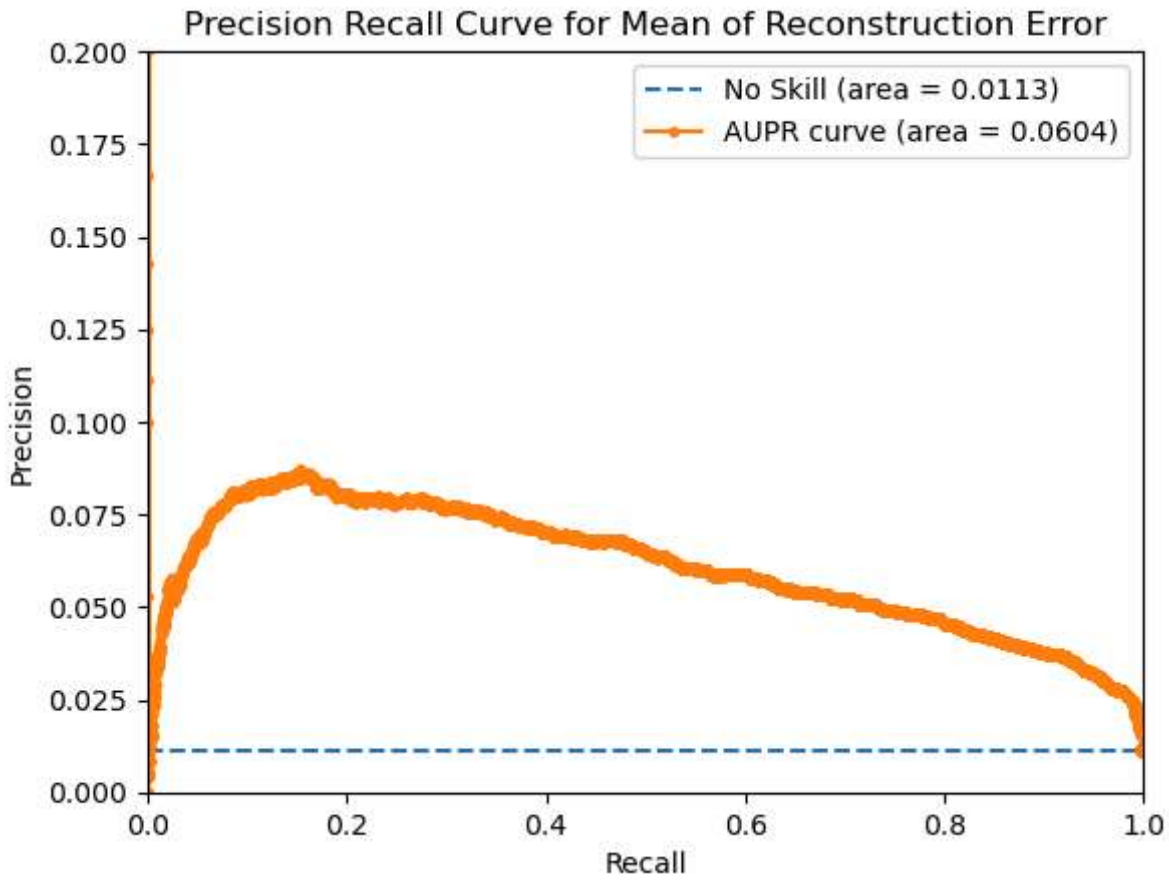

Receiver Operating Characteristic for Mean of Reconstruction Error
True Positive Rate
False Positive Rate
ROC curve (area = 0.8694)
0.0
0.2
0.4
0.6
0.8
1.0


Precision Recall Curve for Mean of Reconstruction Error
Precision
Recall
No Skill (area = 0.0112)
AUPR curve (area = 0.0483)
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 = 0.9210)
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 = 0.0113)
AUPR curve (area = 0.1131)
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 = 0.8840)
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 = 0.0113)
AUPR curve (area = 0.0604)
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