```
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 - MultiModal_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 = HuberLoss()

Training has Begun
epoch [1/20], loss:0.0001
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 occuring
Forward pass completed
```

```
MultiModal_Thermal_T3_IP_T_2024-04-18-10-25-52


---------------------------------
STD Global Classification Results
TPR 0.879, FPR 0.213, Precision 0.045, Recall 0.879
tn 100318, fp 27209, fn 177, tp 1281
std_AUROC  0.908
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.883, FPR 0.213, Precision 0.045, Recall 0.883
tn 100407, fp 27120, fn 170, tp 1288
mean_AUROC 0.913
---------------------------------
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 0.867, FPR 0.187, Precision 0.050, Recall 0.867
tn 103652, fp 23885, fn 193, tp 1255
std_AUROC  0.905
---------------------------------
---------------------------------
Mean Global Classification Results
TPR 0.925, FPR 0.295, Precision 0.034, Recall 0.925
tn 89918, fp 37619, fn 108, tp 1340
mean_AUROC 0.871
---------------------------------
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\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 0.866, FPR 0.168, Precision 0.056, Recall 0.866
tn 106087, fp 21440, fn 196, tp 1262
std_AUROC  0.921
----------------------------------
----------------------------------
Mean Global Classification Results
TPR 0.883, FPR 0.201, Precision 0.048, Recall 0.883
tn 101834, fp 25693, fn 171, tp 1287
mean_AUROC 0.911
----------------------------------
```
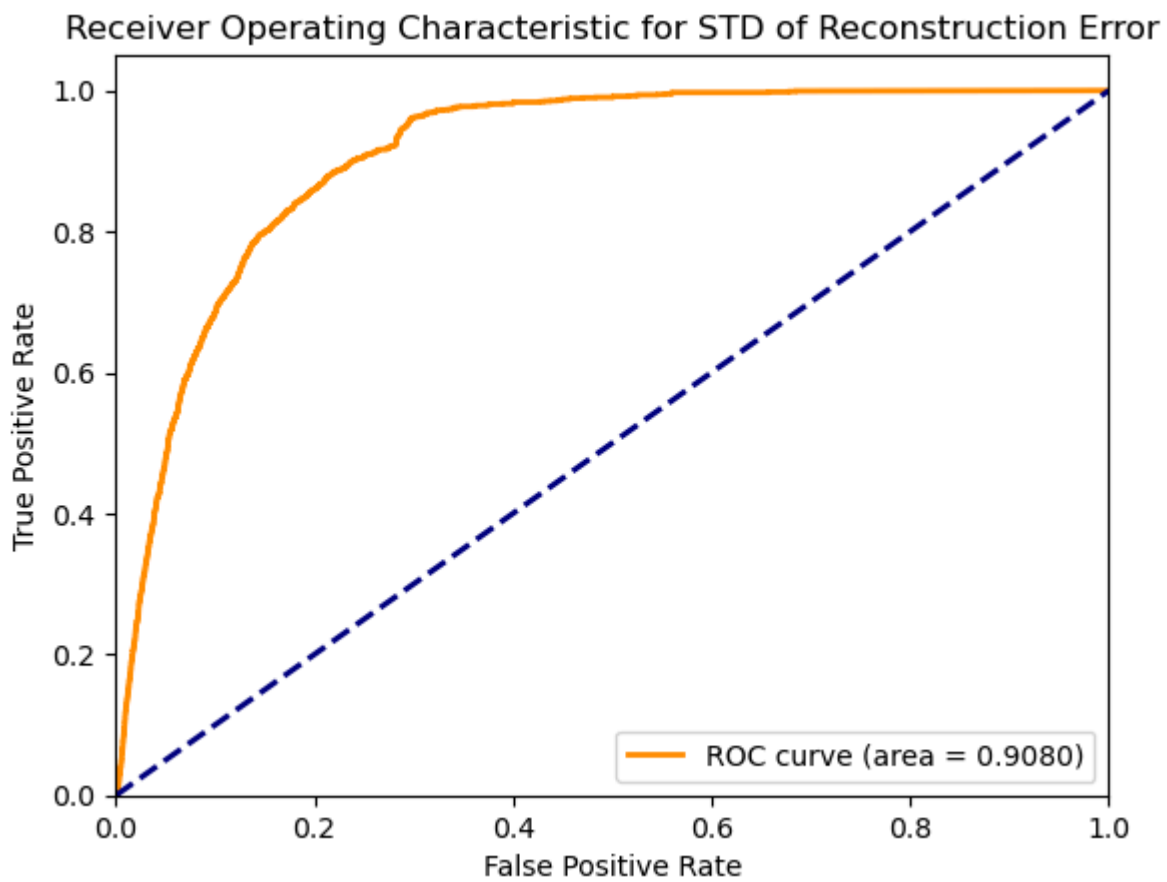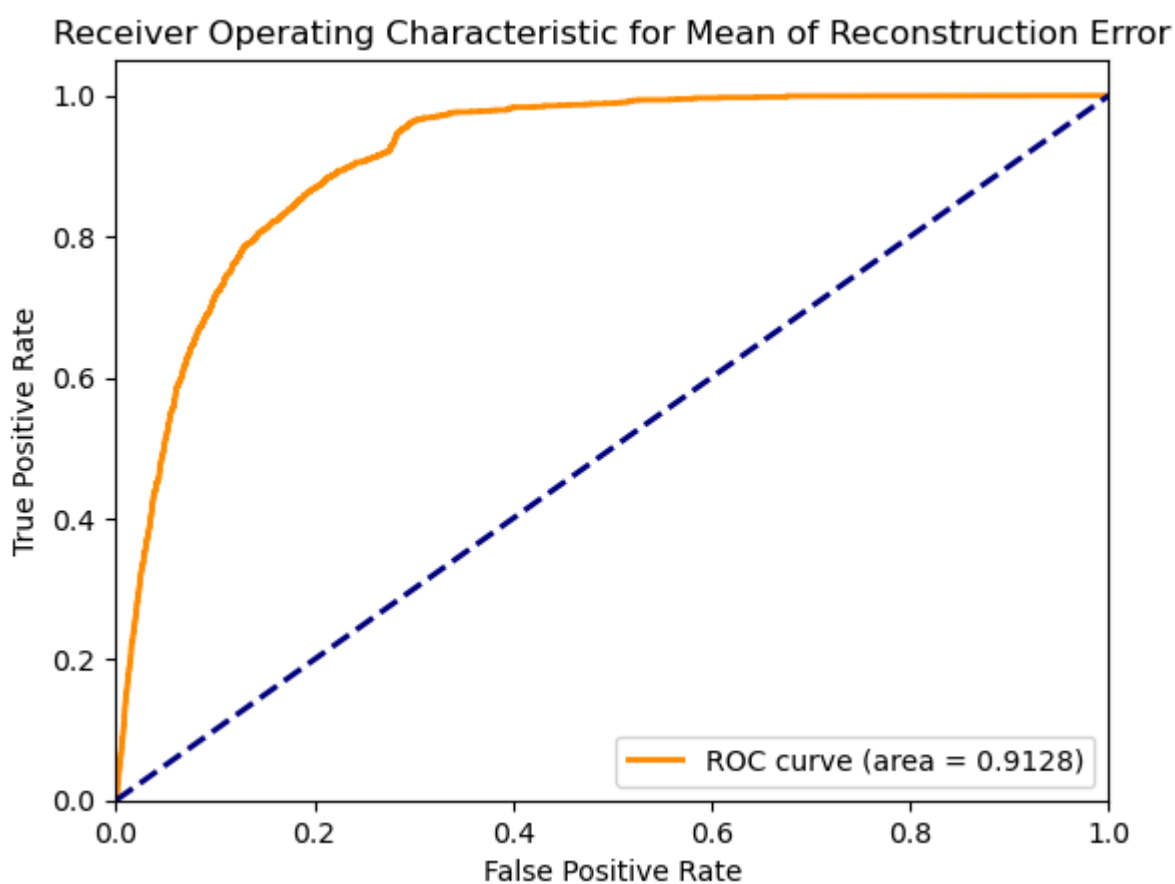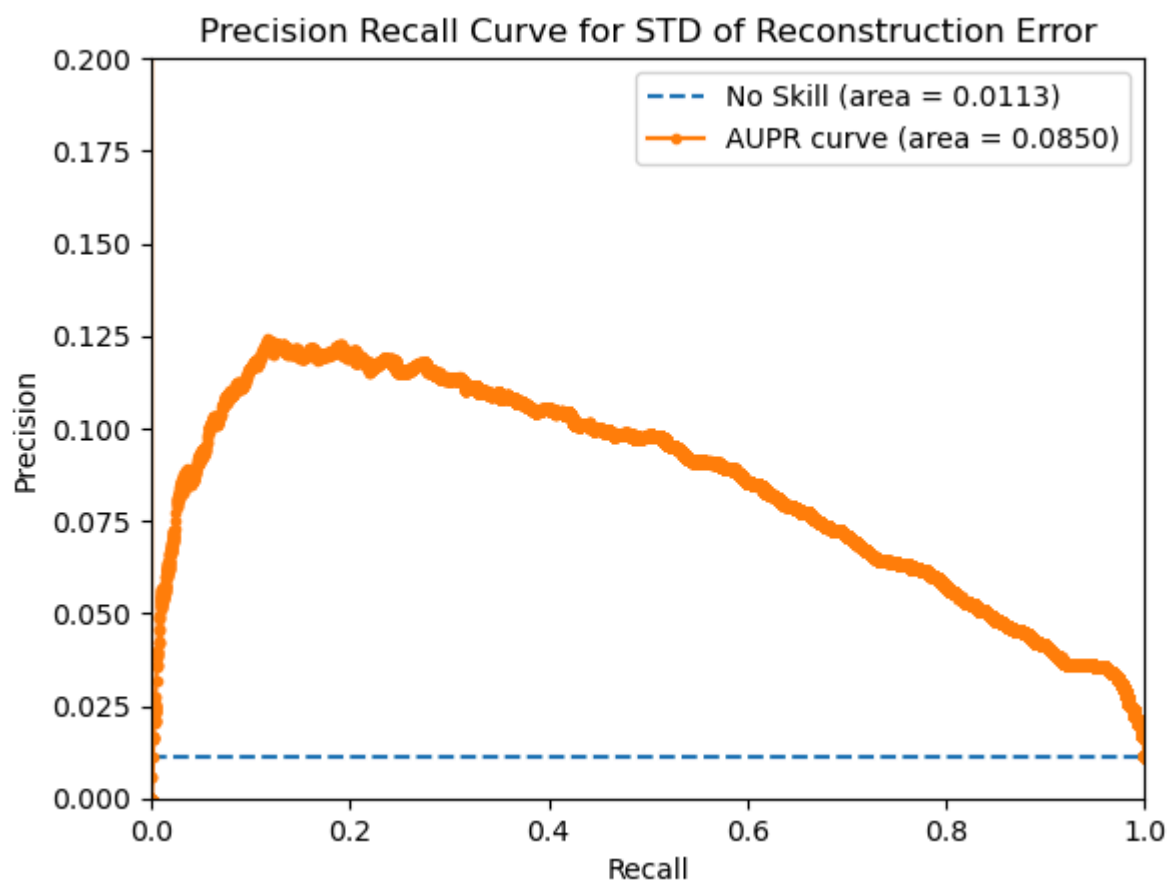
d:\Abdul Rasheed NITT\Academics\Eigth Semester\FYP\Implementation\FallDetection\Code\funct
ions.py:250: RuntimeWarning: Mean of empty slice
  final_performance_mean = np.nanmean(video_metrics, axis=0) # get the mean performance a
cross all videos
c:\Users\abdul\anaconda3\envs\fyp_base_paper_2\lib\site-packages\numpy\lib\nanfunctions.p
y:1670: RuntimeWarning: Degrees of freedom <= 0 for slice.
  var = nanvar(a, axis=axis, dtype=dtype, out=out, ddof=ddof,

()

Precision Recall Curve for STD of Reconstruction Error

- No Skill (area = 0.0113)
- AUPR curve (area = 0.0850)

Receiver Operating Characteristic for Mean of Reconstruction Error

- ROC curve (area = 0.9128)

Precision Recall Curve for Mean of Reconstruction Error

No Skill (area = 0.0113)
AUPR curve (area = 0.0962)

Recall
Precision

Receiver Operating Characteristic for STD of Reconstruction Error

ROC curve (area = 0.9052)

False Positive Rate
True Positive Rate
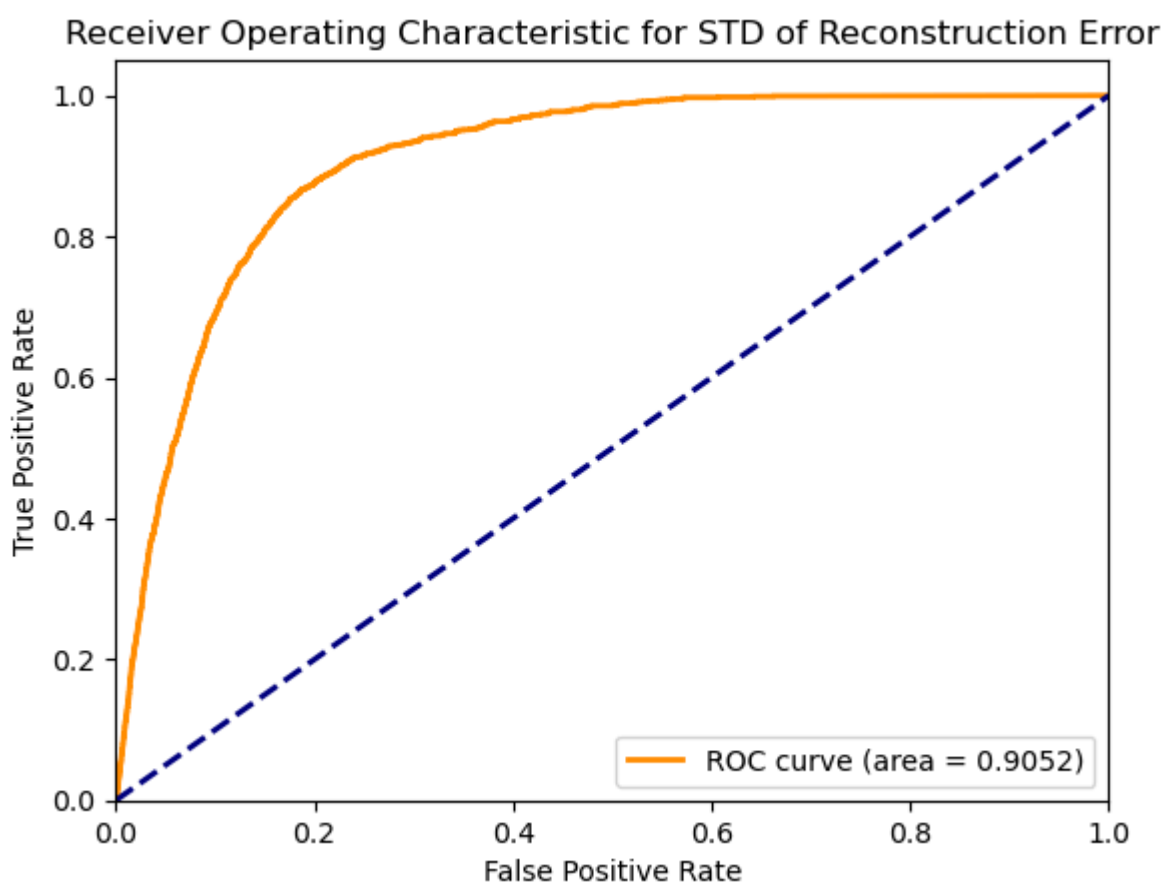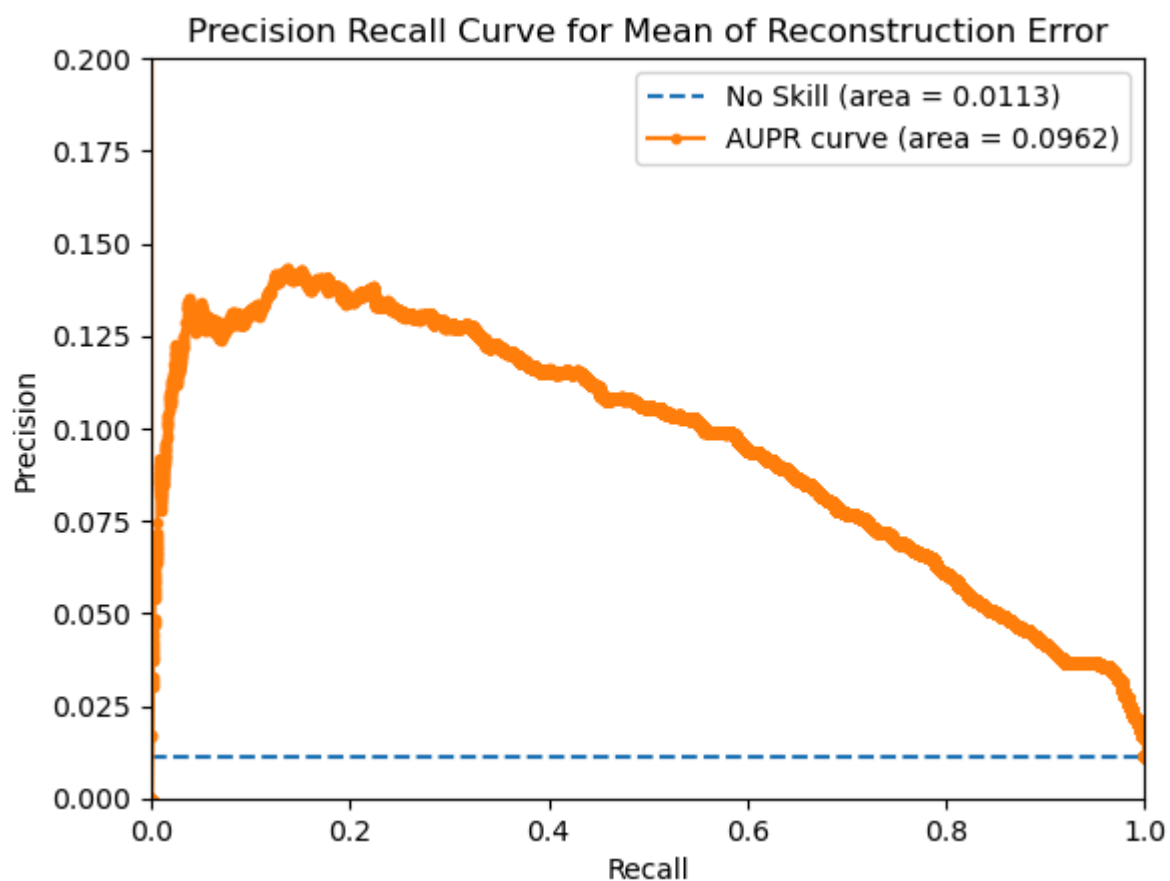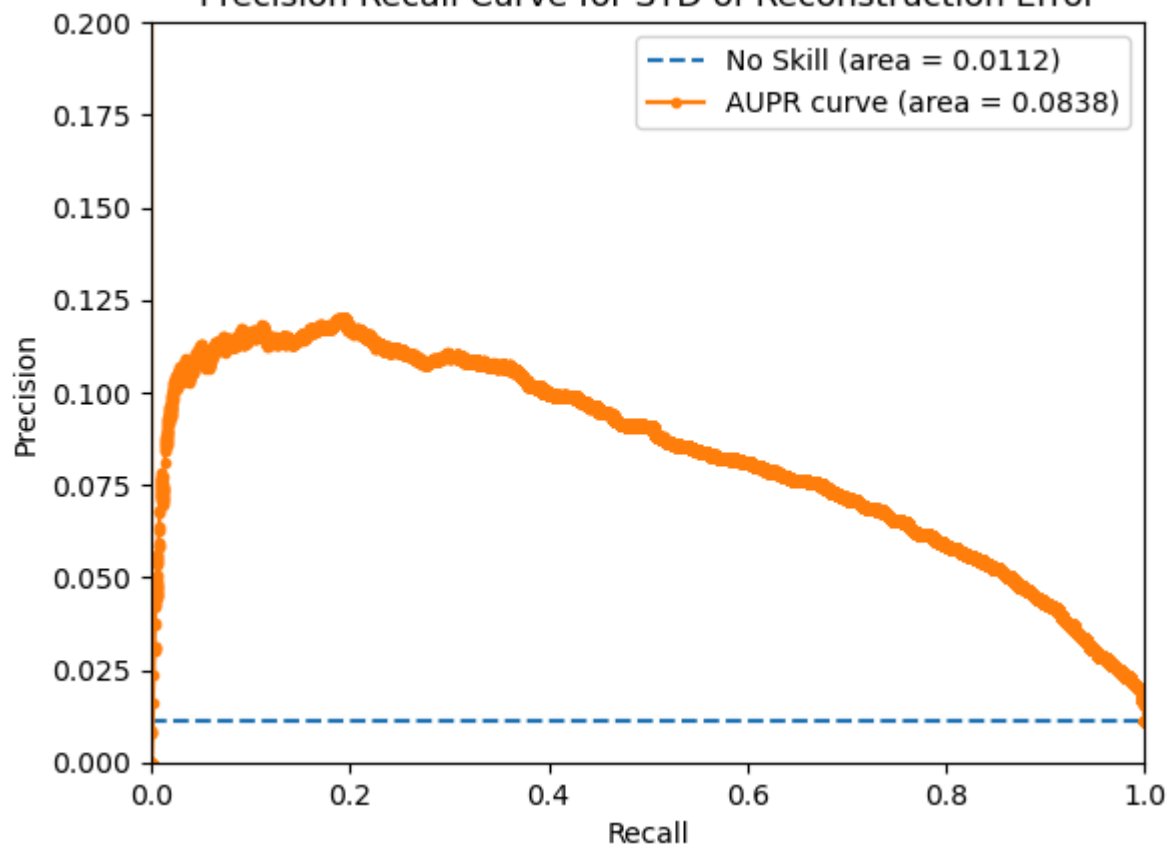
Precision Recall Curve for STD of Reconstruction Error

Receiver Operating Characteristic for Mean of Reconstruction Error

Precision Recall Curve for Mean of Reconstruction Error

- - - No Skill (area = 0.0112)
—●— AUPR curve (area = 0.0581)

Receiver Operating Characteristic for STD of Reconstruction Error

—— ROC curve (area = 0.9214)

Precision Recall Curve for STD of Reconstruction Error

- - - No Skill (area = 0.0113)
— AUPR curve (area = 0.1131)

Recall

Precision

Receiver Operating Characteristic for Mean of Reconstruction Error

— ROC curve (area = 0.9111)

False Positive Rate

True Positive Rate

Precision Recall Curve for Mean of Reconstruction Error