saved_models\transformer_normalized_after_relative_w1000ms.pth Training Report

Total Training Time: 389.11 seconds
Total Inference Time: 0.27 seconds

Train time per epoch: 15.56 seconds

Test Loss: 0.1750
Test Accuracy: 95.09%

Model Size: 7.02 MB

Configuration and Hyperparameters

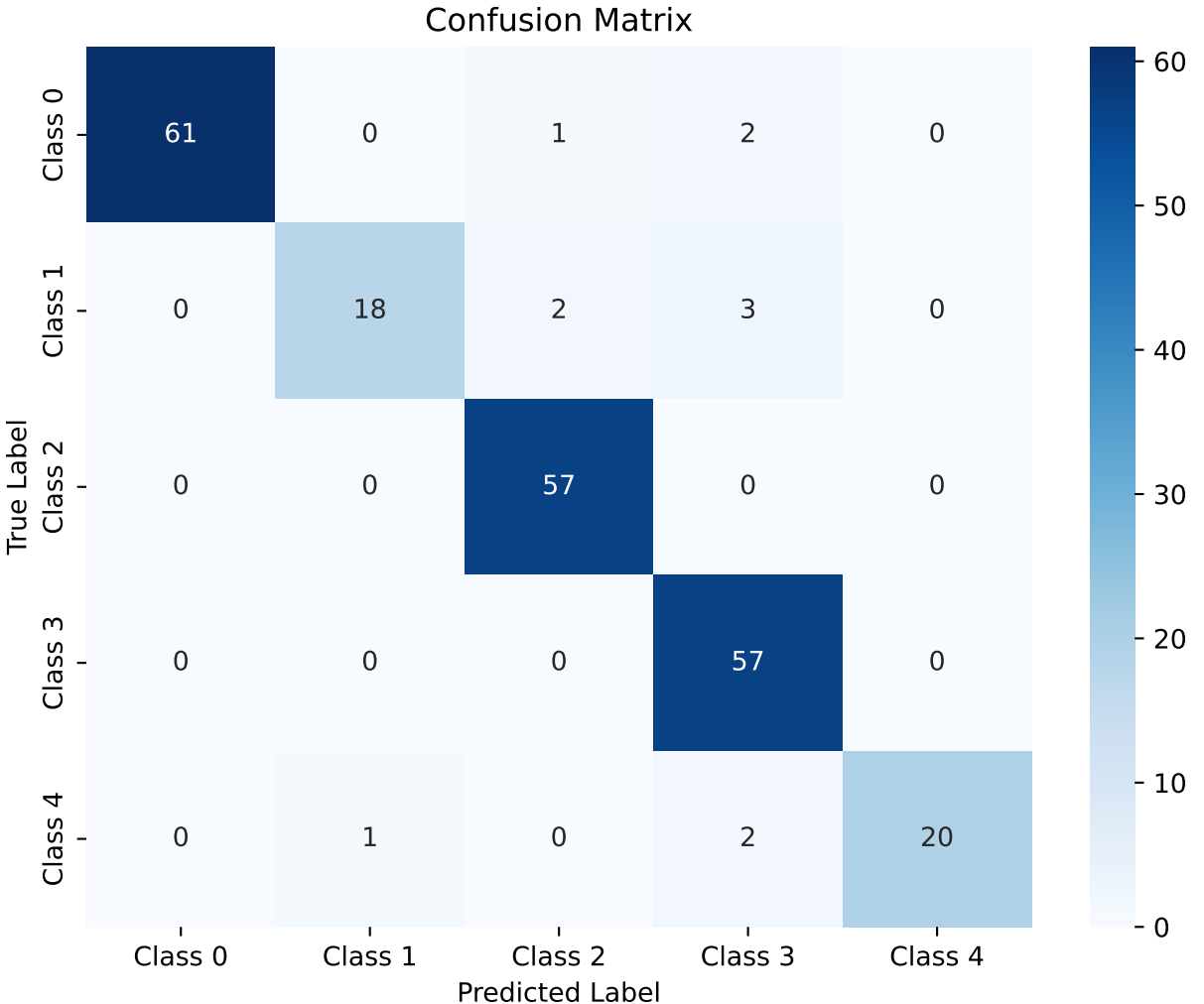
Data Paths:
  Data Directory: data\2024-11-24T10_13_28_d300sec_w1000ms
  Training Data File: data\2024-11-24T10_13_28_d300sec_w1000ms\training.csv
  Test Data File: data\2024-11-24T10_13_28_d300sec_w1000ms\testing.csv
  Model Save Path: saved_models\transformer_normalized_after_relative_w1000ms.pth
  PDF Report Path: run_reports\transformer_normalized_after_relative_w1000ms.pdf

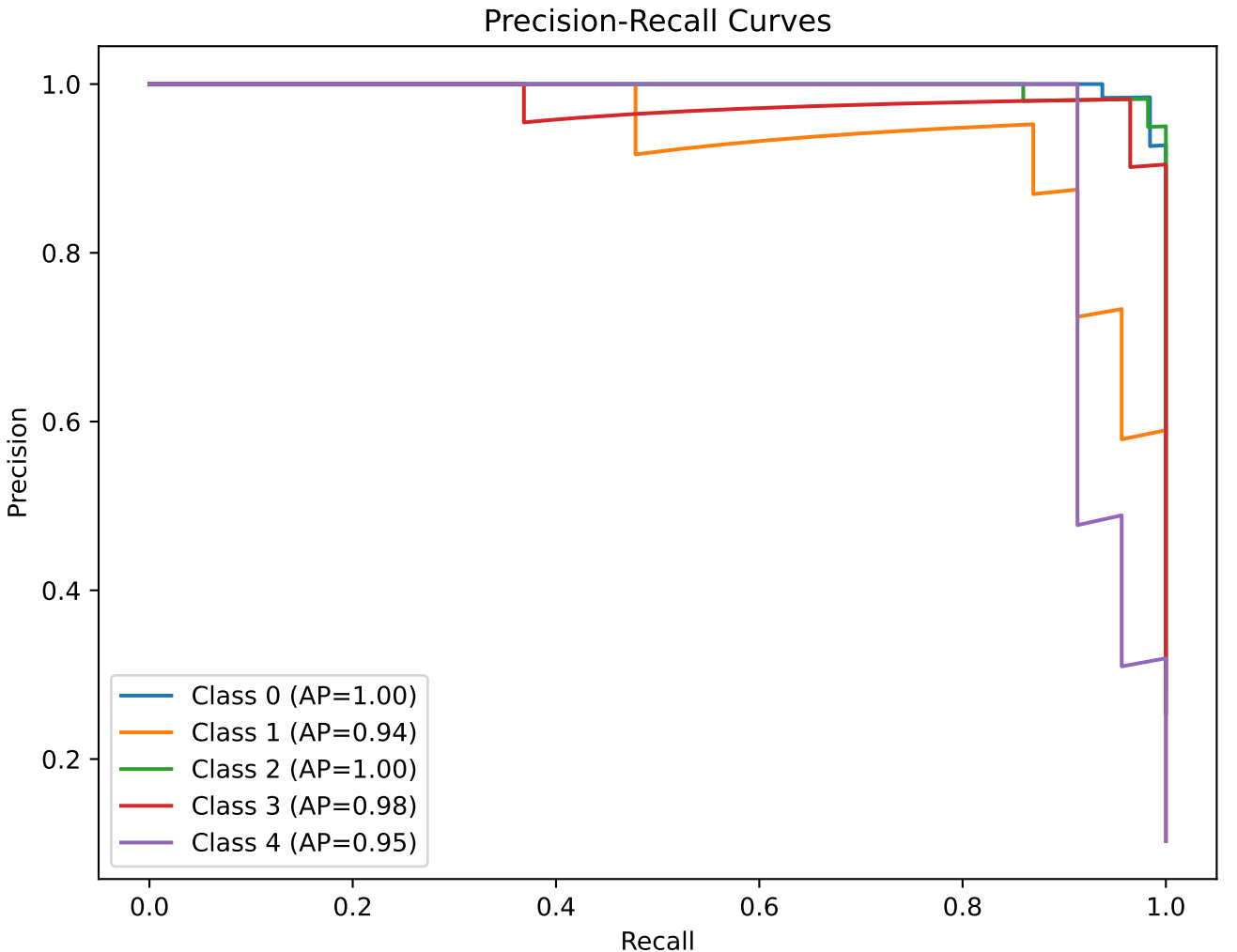
Basic Config:
  num_features: 72
  window_size: 60
  num_classes: 5
  batch_size: 32
  num_epochs: 25
  learning_rate: 0.001
  validation_split: 0.2

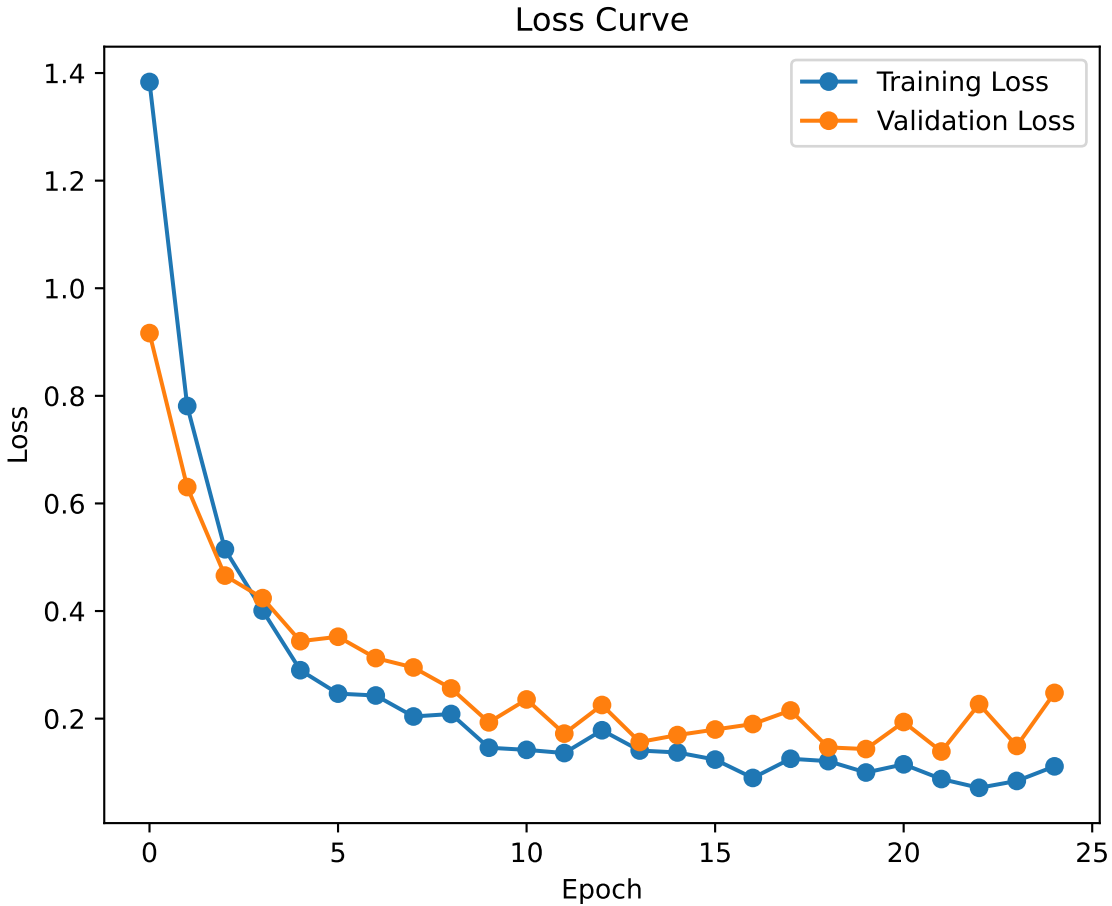
Transformer Hyperparameters:
  d_model: 128
  num_heads: 4
  num_layers: 2
  dropout: 0.1

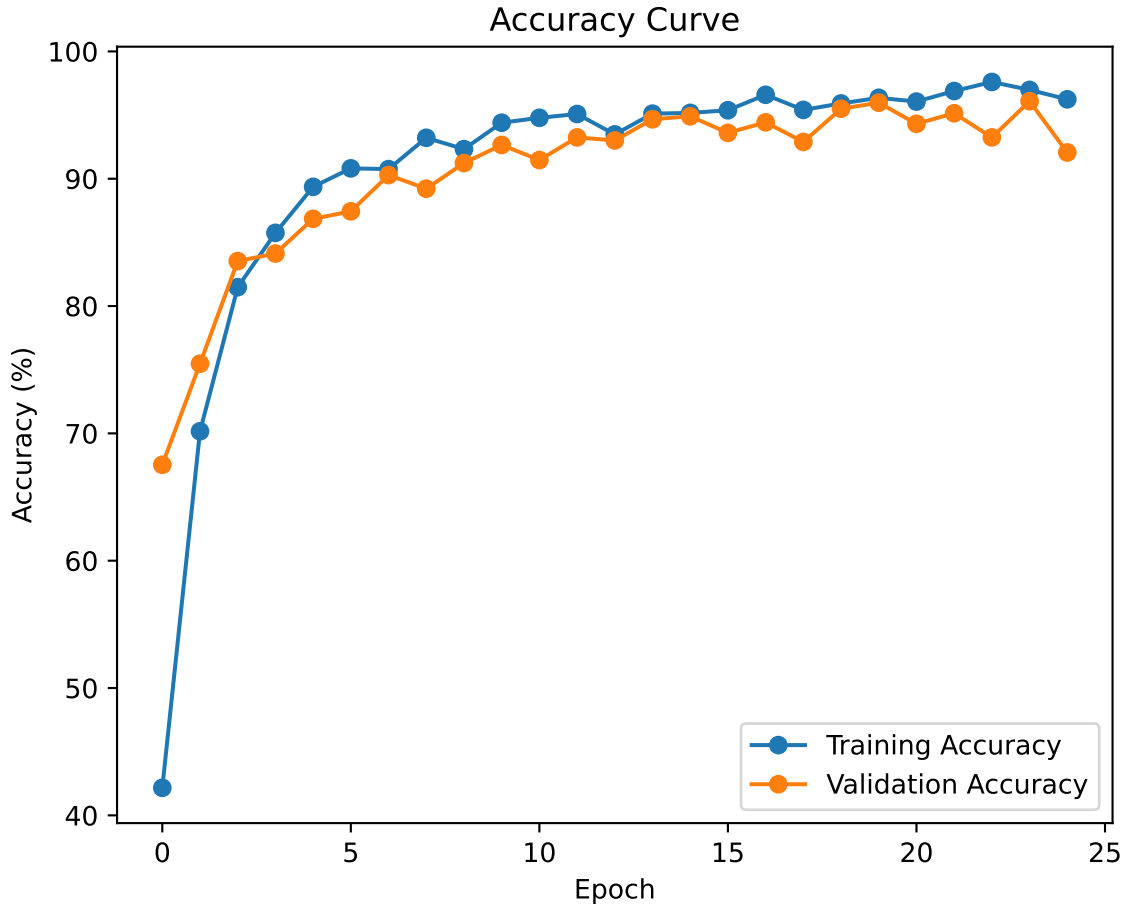
Classification Report

	precision	recall	f1-score	support
Class 0	1.00	0.95	0.98	64
Class 1	0.95	0.78	0.86	23
Class 2	0.95	1.00	0.97	57
Class 3	0.89	1.00	0.94	57
Class 4	1.00	0.87	0.93	23
accuracy			0.95	224
macro avg	0.96	0.92	0.94	224
weighted avg	0.95	0.95	0.95	224


Confusion Matrix
True Label
Predicted Label
Class 0
Class 1
Class 2
Class 3
Class 4
61 0 1 2 0
0 18 2 3 0
0 0 57 0 0
0 0 0 57 0
0 1 0 2 20
60
50
40
30
20
10
0


Precision-Recall Curves
Precision
Recall
1.0
0.8
0.6
0.4
0.2
0.0
0.2
0.4
0.6
0.8
1.0
Class 0 (AP=1.00)
Class 1 (AP=0.94)
Class 2 (AP=1.00)
Class 3 (AP=0.98)
Class 4 (AP=0.95)


Loss Curve
Training Loss
Validation Loss
Loss
Epoch
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
5
10
15
20
25


Accuracy Curve
Training Accuracy
Validation Accuracy
Accuracy (%)
Epoch
100
90
80
70
60
50
40
0
5
10
15
20
25