Transformer Model Training Report

Total Training Time: 142.93 seconds Total Inference Time: 0.24 seconds

> Test Loss: 0.3878 Test Accuracy: 87.50%

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 \(\bar{2}8\) \(\bar{d}300\)sec w10\(\bar{0}0\)ms\testing.csv

Model Save Path: saved_models\transformer_model_normalized_relative_w1000ms.pth PDF Report Path: run_reports\transformer_model_normalized_relative_w1000ms.pdf

Basic Config:

num_features: 72
window_size: 60
num_classes: 5
batch_size: 32
num_epochs: 10

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 Class 1 Class 2 Class 3 Class 4 | 0.94 0.62 0.96 0.89 0.74 | 0.94 0.70 0.91 0.89 0.74 | 0.94 0.65 0.94 0.89 0.74 | 64 23 57 57 23 |
| accuracy macro avg weighted avg | 0.83 0.88 | 0.84 0.88 | 0.88 0.83 0.88 | 224 224 224 |







