

Current exercise is m02

The X_train size is torch.Size([124, 240, 117])

The y_train size is torch.Size([124])

The X_test size is torch.Size([56, 240, 117])

The y_test size is torch.Size([56])

The cuda availability is False

The cuda device is cpu

All frames shape is torch.Size([60, 117])

The frame size is torch.Size([60, 117])

The number of frames are 4 , the frame size is 60 and stride is 60

Current device: cpu

Model output is tensor([0.5094], grad_fn=<SigmoidBackward0>)

The no. of frames are 4

The hyperparameters are : model_dim is = 48 , num_heads = 4 , dim_feedforward = 48 , num_layers = 6 , dropout = 0.1 , stride = 60 , frame_size = 60 , dense_layer_neurons = 118 , epochs = 100, learning_rate = 0.0001

Epoch [1/100], Loss: 0.433018 Val loss: 0.325360 Best model at epoch: 0

Epoch [2/100], Loss: 0.280696 Val loss: 0.235730 Best model at epoch: 0

Epoch [3/100], Loss: 0.262155 Val loss: 0.238140 Best model at epoch: 0

Epoch [4/100], Loss: 0.270755 Val loss: 0.247551 Best model at epoch: 0

Epoch [5/100], Loss: 0.261241 Val loss: 0.235572 Best model at epoch: 0

Epoch [6/100], Loss: 0.263084 Val loss: 0.235209 Best model at epoch: 0

Epoch [7/100], Loss: 0.264218 Val loss: 0.236540 Best model at epoch: 0

Epoch [8/100], Loss: 0.266084 Val loss: 0.235609 Best model at epoch: 0

Epoch [9/100], Loss: 0.268373 Val loss: 0.234913 Best model at epoch: 0

Epoch [10/100], Loss: 0.268208 Val loss: 0.235133 Best model at epoch: 0

Epoch [11/100], Loss: 0.261701 Val loss: 0.235645 Best model at epoch: 0

Epoch [12/100], Loss: 0.268484 Val loss: 0.246731 Best model at epoch: 0

Epoch [13/100], Loss: 0.265832 Val loss: 0.239282 Best model at epoch: 0

Epoch [14/100], Loss: 0.270478 Val loss: 0.234991 Best model at epoch: 0

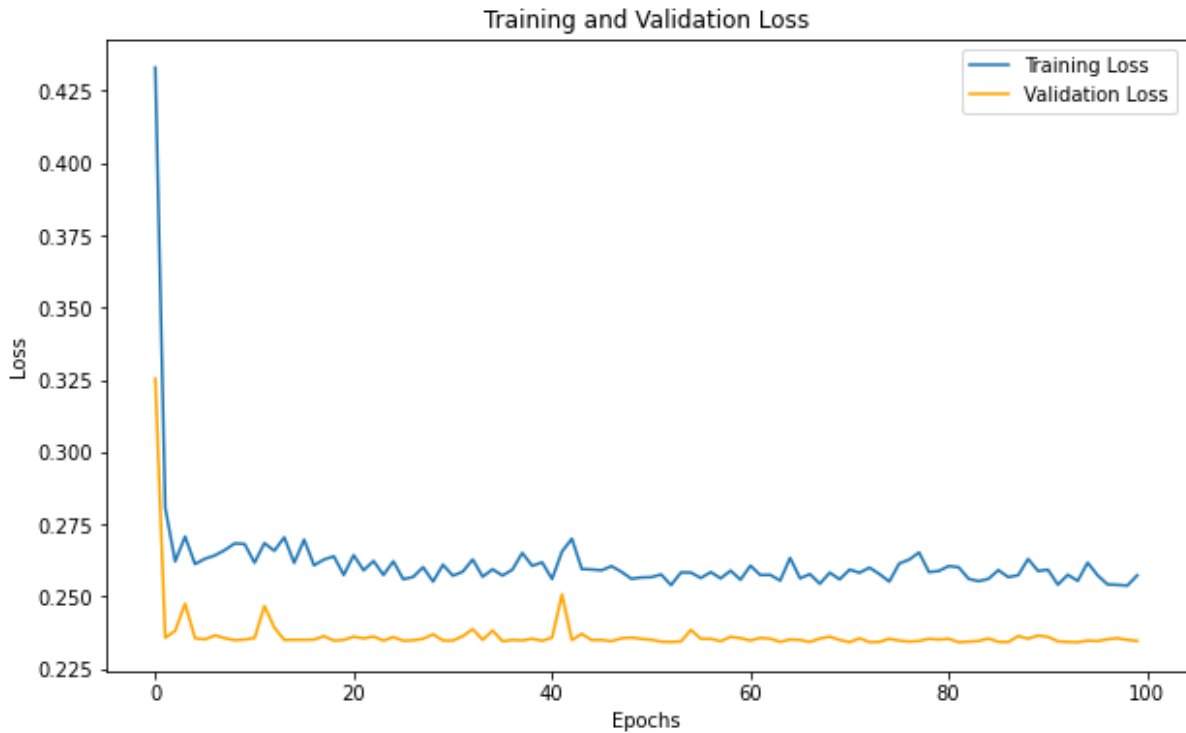
Epoch [15/100], Loss: 0.261649 Val loss: 0.235051 Best model at epoch: 0

Epoch [16/100], Loss: 0.269690 Val loss: 0.235047 Best model at epoch: 0

Epoch [17/100], Loss: 0.260809	Val loss: 0.235087	Best model at epoch: 17
Epoch [18/100], Loss: 0.262803	Val loss: 0.236314	Best model at epoch: 17
Epoch [19/100], Loss: 0.263929	Val loss: 0.234761	Best model at epoch: 19
Epoch [20/100], Loss: 0.257481	Val loss: 0.234997	Best model at epoch: 19
Epoch [21/100], Loss: 0.264320	Val loss: 0.236121	Best model at epoch: 19
Epoch [22/100], Loss: 0.259052	Val loss: 0.235521	Best model at epoch: 19
Epoch [23/100], Loss: 0.262301	Val loss: 0.236151	Best model at epoch: 19
Epoch [24/100], Loss: 0.257458	Val loss: 0.234771	Best model at epoch: 19
Epoch [25/100], Loss: 0.262188	Val loss: 0.235975	Best model at epoch: 19
Epoch [26/100], Loss: 0.255977	Val loss: 0.234725	Best model at epoch: 26
Epoch [27/100], Loss: 0.256801	Val loss: 0.234868	Best model at epoch: 26
Epoch [28/100], Loss: 0.260147	Val loss: 0.235377	Best model at epoch: 26
Epoch [29/100], Loss: 0.255187	Val loss: 0.236939	Best model at epoch: 26
Epoch [30/100], Loss: 0.261026	Val loss: 0.234816	Best model at epoch: 26
Epoch [31/100], Loss: 0.257215	Val loss: 0.234759	Best model at epoch: 26
Epoch [32/100], Loss: 0.258618	Val loss: 0.236297	Best model at epoch: 26
Epoch [33/100], Loss: 0.262832	Val loss: 0.238707	Best model at epoch: 26
Epoch [34/100], Loss: 0.256890	Val loss: 0.235013	Best model at epoch: 26
Epoch [35/100], Loss: 0.259428	Val loss: 0.238241	Best model at epoch: 26
Epoch [36/100], Loss: 0.257278	Val loss: 0.234526	Best model at epoch: 36
Epoch [37/100], Loss: 0.259290	Val loss: 0.234985	Best model at epoch: 36
Epoch [38/100], Loss: 0.265096	Val loss: 0.234828	Best model at epoch: 36
Epoch [39/100], Loss: 0.260643	Val loss: 0.235405	Best model at epoch: 36
Epoch [40/100], Loss: 0.261823	Val loss: 0.234677	Best model at epoch: 36
Epoch [41/100], Loss: 0.256087	Val loss: 0.235805	Best model at epoch: 36
Epoch [42/100], Loss: 0.265572	Val loss: 0.250770	Best model at epoch: 36
Epoch [43/100], Loss: 0.270003	Val loss: 0.234947	Best model at epoch: 36
Epoch [44/100], Loss: 0.259533	Val loss: 0.237073	Best model at epoch: 36
Epoch [45/100], Loss: 0.259357	Val loss: 0.234943	Best model at epoch: 36
Epoch [46/100], Loss: 0.259081	Val loss: 0.234998	Best model at epoch: 36
Epoch [47/100], Loss: 0.260513	Val loss: 0.234552	Best model at epoch: 36

Epoch [48/100], Loss: 0.258546	Val loss: 0.235565	Best model at epoch: 36
Epoch [49/100], Loss: 0.256149	Val loss: 0.235807	Best model at epoch: 36
Epoch [50/100], Loss: 0.256615	Val loss: 0.235347	Best model at epoch: 36
Epoch [51/100], Loss: 0.256701	Val loss: 0.235072	Best model at epoch: 36
Epoch [52/100], Loss: 0.257647	Val loss: 0.234405	Best model at epoch: 52
Epoch [53/100], Loss: 0.253957	Val loss: 0.234269	Best model at epoch: 53
Epoch [54/100], Loss: 0.258348	Val loss: 0.234496	Best model at epoch: 53
Epoch [55/100], Loss: 0.258299	Val loss: 0.238449	Best model at epoch: 53
Epoch [56/100], Loss: 0.256420	Val loss: 0.235398	Best model at epoch: 53
Epoch [57/100], Loss: 0.258462	Val loss: 0.235386	Best model at epoch: 53
Epoch [58/100], Loss: 0.256302	Val loss: 0.234540	Best model at epoch: 53
Epoch [59/100], Loss: 0.258955	Val loss: 0.236083	Best model at epoch: 53
Epoch [60/100], Loss: 0.255825	Val loss: 0.235617	Best model at epoch: 53
Epoch [61/100], Loss: 0.260682	Val loss: 0.234784	Best model at epoch: 53
Epoch [62/100], Loss: 0.257447	Val loss: 0.235684	Best model at epoch: 53
Epoch [63/100], Loss: 0.257498	Val loss: 0.235405	Best model at epoch: 53
Epoch [64/100], Loss: 0.255528	Val loss: 0.234334	Best model at epoch: 53
Epoch [65/100], Loss: 0.263363	Val loss: 0.235157	Best model at epoch: 53
Epoch [66/100], Loss: 0.256302	Val loss: 0.234997	Best model at epoch: 53
Epoch [67/100], Loss: 0.257771	Val loss: 0.234301	Best model at epoch: 53
Epoch [68/100], Loss: 0.254440	Val loss: 0.235467	Best model at epoch: 53
Epoch [69/100], Loss: 0.258271	Val loss: 0.236135	Best model at epoch: 53
Epoch [70/100], Loss: 0.255948	Val loss: 0.234983	Best model at epoch: 53
Epoch [71/100], Loss: 0.259329	Val loss: 0.234226	Best model at epoch: 71
Epoch [72/100], Loss: 0.258230	Val loss: 0.235552	Best model at epoch: 71
Epoch [73/100], Loss: 0.260017	Val loss: 0.234217	Best model at epoch: 73
Epoch [74/100], Loss: 0.257802	Val loss: 0.234320	Best model at epoch: 73
Epoch [75/100], Loss: 0.255198	Val loss: 0.235380	Best model at epoch: 73
Epoch [76/100], Loss: 0.261422	Val loss: 0.234752	Best model at epoch: 73
Epoch [77/100], Loss: 0.262770	Val loss: 0.234441	Best model at epoch: 73
Epoch [78/100], Loss: 0.265252	Val loss: 0.234647	Best model at epoch: 73

Epoch [79/100], Loss: 0.258470	Val loss: 0.235385	Best model at epoch: 73
Epoch [80/100], Loss: 0.258860	Val loss: 0.235139	Best model at epoch: 73
Epoch [81/100], Loss: 0.260561	Val loss: 0.235383	Best model at epoch: 73
Epoch [82/100], Loss: 0.260122	Val loss: 0.234196	Best model at epoch: 82
Epoch [83/100], Loss: 0.256134	Val loss: 0.234411	Best model at epoch: 82
Epoch [84/100], Loss: 0.255330	Val loss: 0.234641	Best model at epoch: 82
Epoch [85/100], Loss: 0.256125	Val loss: 0.235485	Best model at epoch: 82
Epoch [86/100], Loss: 0.259149	Val loss: 0.234327	Best model at epoch: 82
Epoch [87/100], Loss: 0.256722	Val loss: 0.234270	Best model at epoch: 82
Epoch [88/100], Loss: 0.257403	Val loss: 0.236317	Best model at epoch: 82
Epoch [89/100], Loss: 0.263002	Val loss: 0.235426	Best model at epoch: 82
Epoch [90/100], Loss: 0.258834	Val loss: 0.236508	Best model at epoch: 82
Epoch [91/100], Loss: 0.259290	Val loss: 0.236050	Best model at epoch: 82
Epoch [92/100], Loss: 0.254122	Val loss: 0.234526	Best model at epoch: 82
Epoch [93/100], Loss: 0.257531	Val loss: 0.234277	Best model at epoch: 82
Epoch [94/100], Loss: 0.255436	Val loss: 0.234220	Best model at epoch: 82
Epoch [95/100], Loss: 0.261726	Val loss: 0.234739	Best model at epoch: 82
Epoch [96/100], Loss: 0.257353	Val loss: 0.234593	Best model at epoch: 82
Epoch [97/100], Loss: 0.254219	Val loss: 0.235232	Best model at epoch: 82
Epoch [98/100], Loss: 0.254051	Val loss: 0.235584	Best model at epoch: 82
Epoch [99/100], Loss: 0.253793	Val loss: 0.235015	Best model at epoch: 82
Epoch [100/100], Loss: 0.257362	Val loss: 0.234646	Best model at epoch: 82



Total time in seconds : 5093.438331365585

The best model was found at epoch number 82

--- 01:24:53 seconds ---

The training loss is 0.25736226315970895

Performance with the best model is :

The test loss is 0.24284166576606886

Mean absolute deviation : 0.012189

RMS deviation:: 0.018031

The hyperparameters are : model_dim is = 48 , num_heads = 4 , dim_feedforward = 48 , num_layers = 6 , dropout = 0.1 , stride = 60 , frame_size = 60 , dense_layer_neurons = 118 , epochs = 100, learning_rate = 0.0001