

Current exercise is m05

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([0.5185], 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: 0.619260 Val loss: 0.432509 Best model at epoch: 0

Epoch [2/100], Loss: 0.456771 Val loss: 0.333367 Best model at epoch: 0

Epoch [3/100], Loss: 0.320639 Val loss: 0.271706 Best model at epoch: 0

Epoch [4/100], Loss: 0.306798 Val loss: 0.277695 Best model at epoch: 0

Epoch [5/100], Loss: 0.315607 Val loss: 0.275570 Best model at epoch: 0

Epoch [6/100], Loss: 0.319918 Val loss: 0.268454 Best model at epoch: 0

Epoch [7/100], Loss: 0.310034 Val loss: 0.273976 Best model at epoch: 0

Epoch [8/100], Loss: 0.302512 Val loss: 0.266557 Best model at epoch: 0

Epoch [9/100], Loss: 0.308876 Val loss: 0.268344 Best model at epoch: 0

Epoch [10/100], Loss: 0.308045 Val loss: 0.267576 Best model at epoch: 0

Epoch [11/100], Loss: 0.309596 Val loss: 0.266515 Best model at epoch: 0

Epoch [12/100], Loss: 0.298174 Val loss: 0.270610 Best model at epoch: 0

Epoch [13/100], Loss: 0.304752 Val loss: 0.267604 Best model at epoch: 0

Epoch [14/100], Loss: 0.301399 Val loss: 0.269215 Best model at epoch: 0

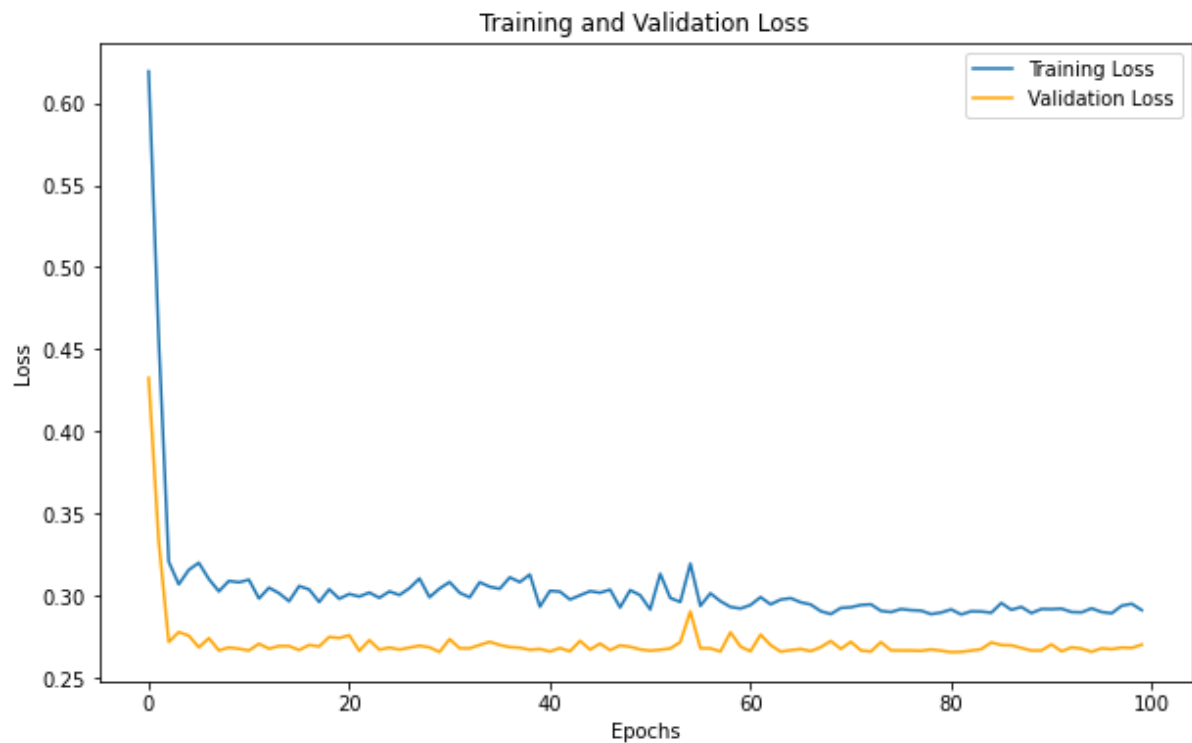
Epoch [15/100], Loss: 0.296502 Val loss: 0.269200 Best model at epoch: 0

Epoch [16/100], Loss: 0.305760 Val loss: 0.266794 Best model at epoch: 0

Epoch [17/100], Loss: 0.303696	Val loss: 0.269848	Best model at epoch: 17
Epoch [18/100], Loss: 0.296043	Val loss: 0.268985	Best model at epoch: 18
Epoch [19/100], Loss: 0.303828	Val loss: 0.274778	Best model at epoch: 18
Epoch [20/100], Loss: 0.298034	Val loss: 0.274111	Best model at epoch: 18
Epoch [21/100], Loss: 0.300916	Val loss: 0.275797	Best model at epoch: 18
Epoch [22/100], Loss: 0.299357	Val loss: 0.266274	Best model at epoch: 22
Epoch [23/100], Loss: 0.301797	Val loss: 0.272821	Best model at epoch: 22
Epoch [24/100], Loss: 0.298572	Val loss: 0.267001	Best model at epoch: 22
Epoch [25/100], Loss: 0.302482	Val loss: 0.268287	Best model at epoch: 22
Epoch [26/100], Loss: 0.300309	Val loss: 0.267096	Best model at epoch: 22
Epoch [27/100], Loss: 0.304466	Val loss: 0.268249	Best model at epoch: 22
Epoch [28/100], Loss: 0.310370	Val loss: 0.269430	Best model at epoch: 22
Epoch [29/100], Loss: 0.298955	Val loss: 0.268428	Best model at epoch: 22
Epoch [30/100], Loss: 0.304238	Val loss: 0.265643	Best model at epoch: 30
Epoch [31/100], Loss: 0.308178	Val loss: 0.273436	Best model at epoch: 30
Epoch [32/100], Loss: 0.301675	Val loss: 0.267888	Best model at epoch: 30
Epoch [33/100], Loss: 0.298872	Val loss: 0.267841	Best model at epoch: 30
Epoch [34/100], Loss: 0.308062	Val loss: 0.269872	Best model at epoch: 30
Epoch [35/100], Loss: 0.305339	Val loss: 0.271772	Best model at epoch: 30
Epoch [36/100], Loss: 0.304043	Val loss: 0.269861	Best model at epoch: 30
Epoch [37/100], Loss: 0.311050	Val loss: 0.268581	Best model at epoch: 30
Epoch [38/100], Loss: 0.308148	Val loss: 0.268214	Best model at epoch: 30
Epoch [39/100], Loss: 0.312777	Val loss: 0.266934	Best model at epoch: 30
Epoch [40/100], Loss: 0.293210	Val loss: 0.267440	Best model at epoch: 30
Epoch [41/100], Loss: 0.302842	Val loss: 0.265930	Best model at epoch: 30
Epoch [42/100], Loss: 0.302378	Val loss: 0.268012	Best model at epoch: 30
Epoch [43/100], Loss: 0.297571	Val loss: 0.266002	Best model at epoch: 30
Epoch [44/100], Loss: 0.300119	Val loss: 0.272350	Best model at epoch: 30
Epoch [45/100], Loss: 0.302640	Val loss: 0.267054	Best model at epoch: 30
Epoch [46/100], Loss: 0.301709	Val loss: 0.270729	Best model at epoch: 30
Epoch [47/100], Loss: 0.303567	Val loss: 0.266723	Best model at epoch: 30

Epoch [48/100], Loss: 0.292718	Val loss: 0.269616	Best model at epoch: 30
Epoch [49/100], Loss: 0.303248	Val loss: 0.268767	Best model at epoch: 30
Epoch [50/100], Loss: 0.300196	Val loss: 0.267172	Best model at epoch: 30
Epoch [51/100], Loss: 0.291501	Val loss: 0.266414	Best model at epoch: 30
Epoch [52/100], Loss: 0.313203	Val loss: 0.266963	Best model at epoch: 30
Epoch [53/100], Loss: 0.298467	Val loss: 0.267735	Best model at epoch: 30
Epoch [54/100], Loss: 0.296082	Val loss: 0.271619	Best model at epoch: 30
Epoch [55/100], Loss: 0.319413	Val loss: 0.290346	Best model at epoch: 30
Epoch [56/100], Loss: 0.293701	Val loss: 0.267893	Best model at epoch: 30
Epoch [57/100], Loss: 0.301328	Val loss: 0.267809	Best model at epoch: 30
Epoch [58/100], Loss: 0.296535	Val loss: 0.265919	Best model at epoch: 30
Epoch [59/100], Loss: 0.293034	Val loss: 0.277576	Best model at epoch: 30
Epoch [60/100], Loss: 0.292065	Val loss: 0.268849	Best model at epoch: 30
Epoch [61/100], Loss: 0.294214	Val loss: 0.266074	Best model at epoch: 30
Epoch [62/100], Loss: 0.298996	Val loss: 0.276169	Best model at epoch: 30
Epoch [63/100], Loss: 0.294600	Val loss: 0.269768	Best model at epoch: 30
Epoch [64/100], Loss: 0.297522	Val loss: 0.265837	Best model at epoch: 30
Epoch [65/100], Loss: 0.298384	Val loss: 0.266689	Best model at epoch: 30
Epoch [66/100], Loss: 0.295869	Val loss: 0.267455	Best model at epoch: 30
Epoch [67/100], Loss: 0.294520	Val loss: 0.266130	Best model at epoch: 30
Epoch [68/100], Loss: 0.290449	Val loss: 0.268531	Best model at epoch: 30
Epoch [69/100], Loss: 0.288667	Val loss: 0.272287	Best model at epoch: 30
Epoch [70/100], Loss: 0.292433	Val loss: 0.267479	Best model at epoch: 30
Epoch [71/100], Loss: 0.292844	Val loss: 0.271780	Best model at epoch: 30
Epoch [72/100], Loss: 0.294227	Val loss: 0.266564	Best model at epoch: 30
Epoch [73/100], Loss: 0.294623	Val loss: 0.265943	Best model at epoch: 30
Epoch [74/100], Loss: 0.290629	Val loss: 0.271594	Best model at epoch: 30
Epoch [75/100], Loss: 0.289905	Val loss: 0.266621	Best model at epoch: 30
Epoch [76/100], Loss: 0.291744	Val loss: 0.266533	Best model at epoch: 30
Epoch [77/100], Loss: 0.291066	Val loss: 0.266505	Best model at epoch: 30
Epoch [78/100], Loss: 0.290773	Val loss: 0.266317	Best model at epoch: 30

Epoch [79/100], Loss: 0.288656	Val loss: 0.267181	Best model at epoch: 30
Epoch [80/100], Loss: 0.289626	Val loss: 0.266404	Best model at epoch: 30
Epoch [81/100], Loss: 0.291507	Val loss: 0.265505	Best model at epoch: 81
Epoch [82/100], Loss: 0.288446	Val loss: 0.265704	Best model at epoch: 81
Epoch [83/100], Loss: 0.290398	Val loss: 0.266459	Best model at epoch: 81
Epoch [84/100], Loss: 0.290250	Val loss: 0.267310	Best model at epoch: 81
Epoch [85/100], Loss: 0.289487	Val loss: 0.271405	Best model at epoch: 81
Epoch [86/100], Loss: 0.295428	Val loss: 0.269839	Best model at epoch: 81
Epoch [87/100], Loss: 0.291271	Val loss: 0.269692	Best model at epoch: 81
Epoch [88/100], Loss: 0.293052	Val loss: 0.268059	Best model at epoch: 81
Epoch [89/100], Loss: 0.289273	Val loss: 0.266481	Best model at epoch: 81
Epoch [90/100], Loss: 0.291790	Val loss: 0.266552	Best model at epoch: 81
Epoch [91/100], Loss: 0.291677	Val loss: 0.270207	Best model at epoch: 81
Epoch [92/100], Loss: 0.291988	Val loss: 0.266041	Best model at epoch: 81
Epoch [93/100], Loss: 0.289932	Val loss: 0.268425	Best model at epoch: 81
Epoch [94/100], Loss: 0.289736	Val loss: 0.267642	Best model at epoch: 81
Epoch [95/100], Loss: 0.292168	Val loss: 0.265768	Best model at epoch: 81
Epoch [96/100], Loss: 0.289914	Val loss: 0.267861	Best model at epoch: 81
Epoch [97/100], Loss: 0.289170	Val loss: 0.267328	Best model at epoch: 81
Epoch [98/100], Loss: 0.293774	Val loss: 0.268315	Best model at epoch: 81
Epoch [99/100], Loss: 0.294952	Val loss: 0.268059	Best model at epoch: 81
Epoch [100/100], Loss: 0.291080	Val loss: 0.270057	Best model at epoch: 81



Total time in seconds : 5183.031526565552

The best model was found at epoch number 81

--- 01:26:23 seconds ---

The training loss is 0.2910803489319913

Performance with the best model is :

The test loss is 0.28908756162439075

Mean absolute deviation : 0.014075

RMS deviation:: 0.021123

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