

Current exercise is m07

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([0.5197], grad_fn=<SigmoidBackward0>)

The no. of frames are 4

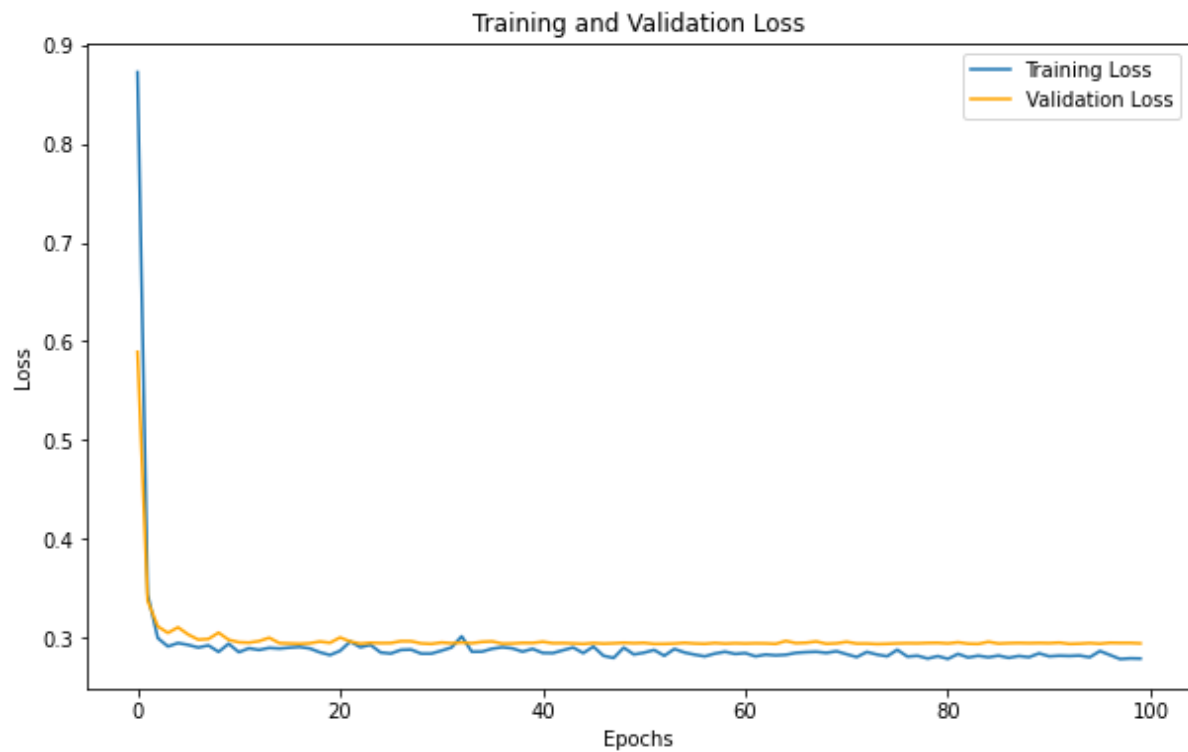
The hyperparameters are : model_dim is = 48 , num_heads = 4 , dim_feedforward = 48 , num_layers = 6 , dropout = 0.1 , stride = 60 , frame_size = 60 , dense_layer_neurons = 118 , epochs = 100, learning_rate = 0.0001

Epoch [1/100], Loss: 0.872328	Val loss: 0.589249	Best model at epoch: 0
Epoch [2/100], Loss: 0.343921	Val loss: 0.337456	Best model at epoch: 0
Epoch [3/100], Loss: 0.299720	Val loss: 0.311469	Best model at epoch: 0
Epoch [4/100], Loss: 0.291201	Val loss: 0.304942	Best model at epoch: 0
Epoch [5/100], Loss: 0.294677	Val loss: 0.310576	Best model at epoch: 0
Epoch [6/100], Loss: 0.292776	Val loss: 0.303328	Best model at epoch: 0
Epoch [7/100], Loss: 0.290115	Val loss: 0.298125	Best model at epoch: 0
Epoch [8/100], Loss: 0.292280	Val loss: 0.298738	Best model at epoch: 0
Epoch [9/100], Loss: 0.285749	Val loss: 0.305158	Best model at epoch: 0
Epoch [10/100], Loss: 0.293950	Val loss: 0.297932	Best model at epoch: 0
Epoch [11/100], Loss: 0.285410	Val loss: 0.295479	Best model at epoch: 0
Epoch [12/100], Loss: 0.289359	Val loss: 0.295039	Best model at epoch: 0
Epoch [13/100], Loss: 0.287668	Val loss: 0.296609	Best model at epoch: 0
Epoch [14/100], Loss: 0.289770	Val loss: 0.300008	Best model at epoch: 0
Epoch [15/100], Loss: 0.289101	Val loss: 0.294619	Best model at epoch: 0
Epoch [16/100], Loss: 0.290020	Val loss: 0.294252	Best model at epoch: 0

Epoch [17/100], Loss: 0.290727	Val loss: 0.293906	Best model at epoch: 17
Epoch [18/100], Loss: 0.289182	Val loss: 0.294430	Best model at epoch: 17
Epoch [19/100], Loss: 0.285288	Val loss: 0.296173	Best model at epoch: 17
Epoch [20/100], Loss: 0.282512	Val loss: 0.294910	Best model at epoch: 17
Epoch [21/100], Loss: 0.286786	Val loss: 0.300281	Best model at epoch: 17
Epoch [22/100], Loss: 0.296178	Val loss: 0.296180	Best model at epoch: 17
Epoch [23/100], Loss: 0.290386	Val loss: 0.294032	Best model at epoch: 17
Epoch [24/100], Loss: 0.292804	Val loss: 0.294928	Best model at epoch: 17
Epoch [25/100], Loss: 0.285089	Val loss: 0.294589	Best model at epoch: 17
Epoch [26/100], Loss: 0.284052	Val loss: 0.294683	Best model at epoch: 17
Epoch [27/100], Loss: 0.287682	Val loss: 0.296552	Best model at epoch: 17
Epoch [28/100], Loss: 0.288045	Val loss: 0.296499	Best model at epoch: 17
Epoch [29/100], Loss: 0.283971	Val loss: 0.294310	Best model at epoch: 17
Epoch [30/100], Loss: 0.283973	Val loss: 0.293791	Best model at epoch: 30
Epoch [31/100], Loss: 0.286909	Val loss: 0.295218	Best model at epoch: 30
Epoch [32/100], Loss: 0.290188	Val loss: 0.294470	Best model at epoch: 30
Epoch [33/100], Loss: 0.301471	Val loss: 0.295200	Best model at epoch: 30
Epoch [34/100], Loss: 0.285868	Val loss: 0.294493	Best model at epoch: 30
Epoch [35/100], Loss: 0.285973	Val loss: 0.295830	Best model at epoch: 30
Epoch [36/100], Loss: 0.288879	Val loss: 0.296308	Best model at epoch: 30
Epoch [37/100], Loss: 0.290436	Val loss: 0.294104	Best model at epoch: 30
Epoch [38/100], Loss: 0.289315	Val loss: 0.294207	Best model at epoch: 30
Epoch [39/100], Loss: 0.285949	Val loss: 0.294844	Best model at epoch: 30
Epoch [40/100], Loss: 0.288744	Val loss: 0.294733	Best model at epoch: 30
Epoch [41/100], Loss: 0.284683	Val loss: 0.295976	Best model at epoch: 30
Epoch [42/100], Loss: 0.284500	Val loss: 0.294526	Best model at epoch: 30
Epoch [43/100], Loss: 0.287334	Val loss: 0.294643	Best model at epoch: 30
Epoch [44/100], Loss: 0.290166	Val loss: 0.294293	Best model at epoch: 30
Epoch [45/100], Loss: 0.284475	Val loss: 0.293794	Best model at epoch: 30
Epoch [46/100], Loss: 0.291086	Val loss: 0.294661	Best model at epoch: 30
Epoch [47/100], Loss: 0.281749	Val loss: 0.294065	Best model at epoch: 30

Epoch [48/100], Loss: 0.279544	Val loss: 0.294409	Best model at epoch: 30
Epoch [49/100], Loss: 0.290009	Val loss: 0.294965	Best model at epoch: 30
Epoch [50/100], Loss: 0.283134	Val loss: 0.294503	Best model at epoch: 30
Epoch [51/100], Loss: 0.284907	Val loss: 0.294869	Best model at epoch: 30
Epoch [52/100], Loss: 0.287622	Val loss: 0.293800	Best model at epoch: 30
Epoch [53/100], Loss: 0.281798	Val loss: 0.293832	Best model at epoch: 30
Epoch [54/100], Loss: 0.288668	Val loss: 0.294154	Best model at epoch: 30
Epoch [55/100], Loss: 0.285070	Val loss: 0.294883	Best model at epoch: 30
Epoch [56/100], Loss: 0.282913	Val loss: 0.294208	Best model at epoch: 30
Epoch [57/100], Loss: 0.281177	Val loss: 0.293890	Best model at epoch: 30
Epoch [58/100], Loss: 0.284007	Val loss: 0.294734	Best model at epoch: 30
Epoch [59/100], Loss: 0.285838	Val loss: 0.294084	Best model at epoch: 30
Epoch [60/100], Loss: 0.283642	Val loss: 0.294460	Best model at epoch: 30
Epoch [61/100], Loss: 0.284477	Val loss: 0.294194	Best model at epoch: 30
Epoch [62/100], Loss: 0.281196	Val loss: 0.294425	Best model at epoch: 30
Epoch [63/100], Loss: 0.282986	Val loss: 0.294299	Best model at epoch: 30
Epoch [64/100], Loss: 0.282200	Val loss: 0.293836	Best model at epoch: 30
Epoch [65/100], Loss: 0.282772	Val loss: 0.296775	Best model at epoch: 30
Epoch [66/100], Loss: 0.284733	Val loss: 0.294558	Best model at epoch: 30
Epoch [67/100], Loss: 0.285447	Val loss: 0.294974	Best model at epoch: 30
Epoch [68/100], Loss: 0.285837	Val loss: 0.296236	Best model at epoch: 30
Epoch [69/100], Loss: 0.284699	Val loss: 0.293923	Best model at epoch: 30
Epoch [70/100], Loss: 0.286373	Val loss: 0.294364	Best model at epoch: 30
Epoch [71/100], Loss: 0.283329	Val loss: 0.295901	Best model at epoch: 30
Epoch [72/100], Loss: 0.280468	Val loss: 0.294110	Best model at epoch: 30
Epoch [73/100], Loss: 0.285631	Val loss: 0.294146	Best model at epoch: 30
Epoch [74/100], Loss: 0.282983	Val loss: 0.293660	Best model at epoch: 74
Epoch [75/100], Loss: 0.281261	Val loss: 0.293878	Best model at epoch: 74
Epoch [76/100], Loss: 0.287809	Val loss: 0.294314	Best model at epoch: 74
Epoch [77/100], Loss: 0.280965	Val loss: 0.294500	Best model at epoch: 74
Epoch [78/100], Loss: 0.281796	Val loss: 0.294387	Best model at epoch: 74

Epoch [79/100], Loss: 0.278971	Val loss: 0.294779	Best model at epoch: 74
Epoch [80/100], Loss: 0.281383	Val loss: 0.294874	Best model at epoch: 74
Epoch [81/100], Loss: 0.278635	Val loss: 0.294269	Best model at epoch: 74
Epoch [82/100], Loss: 0.283629	Val loss: 0.295406	Best model at epoch: 74
Epoch [83/100], Loss: 0.280041	Val loss: 0.293991	Best model at epoch: 74
Epoch [84/100], Loss: 0.281818	Val loss: 0.293788	Best model at epoch: 74
Epoch [85/100], Loss: 0.280243	Val loss: 0.295905	Best model at epoch: 74
Epoch [86/100], Loss: 0.281950	Val loss: 0.294117	Best model at epoch: 74
Epoch [87/100], Loss: 0.279688	Val loss: 0.294556	Best model at epoch: 74
Epoch [88/100], Loss: 0.281556	Val loss: 0.294760	Best model at epoch: 74
Epoch [89/100], Loss: 0.280341	Val loss: 0.294544	Best model at epoch: 74
Epoch [90/100], Loss: 0.284235	Val loss: 0.294748	Best model at epoch: 74
Epoch [91/100], Loss: 0.281206	Val loss: 0.294551	Best model at epoch: 74
Epoch [92/100], Loss: 0.281857	Val loss: 0.295091	Best model at epoch: 74
Epoch [93/100], Loss: 0.281582	Val loss: 0.293789	Best model at epoch: 74
Epoch [94/100], Loss: 0.282006	Val loss: 0.294048	Best model at epoch: 74
Epoch [95/100], Loss: 0.280268	Val loss: 0.294638	Best model at epoch: 74
Epoch [96/100], Loss: 0.286549	Val loss: 0.293973	Best model at epoch: 74
Epoch [97/100], Loss: 0.282537	Val loss: 0.294942	Best model at epoch: 74
Epoch [98/100], Loss: 0.278460	Val loss: 0.294774	Best model at epoch: 74
Epoch [99/100], Loss: 0.279155	Val loss: 0.294779	Best model at epoch: 74
Epoch [100/100], Loss: 0.278928	Val loss: 0.294317	Best model at epoch: 74



Total time in seconds : 5078.869448184967

The best model was found at epoch number 74

--- 01:24:38 seconds ---

The training loss is 0.2789280465594283

Performance with the best model is :

The test loss is 0.27687399248991695

Mean absolute deviation : 0.009104

RMS deviation:: 0.015345

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