

Training for CA\_3

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 60ms/step - loss: 0.4753 - val\_loss: 0.4123

Epoch 2/100

50/50 [=====] - 3s 52ms/step - loss: 0.3788 - val\_loss: 0.5015

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.3674 - val\_loss: 0.4306

Epoch 4/100

50/50 [=====] - 3s 53ms/step - loss: 0.3558 - val\_loss: 0.4287

Epoch 5/100

50/50 [=====] - 3s 53ms/step - loss: 0.3508 - val\_loss: 0.4593

Epoch 6/100

50/50 [=====] - 3s 52ms/step - loss: 0.3507 - val\_loss: 0.4222

Epoch 7/100

50/50 [=====] - 3s 54ms/step - loss: 0.3385 - val\_loss: 0.4380

Epoch 8/100

50/50 [=====] - 3s 54ms/step - loss: 0.3383 - val\_loss: 0.4116

Epoch 9/100

50/50 [=====] - 3s 54ms/step - loss: 0.3308 - val\_loss: 0.4462

Epoch 10/100

50/50 [=====] - 3s 56ms/step - loss: 0.3261 - val\_loss: 0.4489

Epoch 11/100

50/50 [=====] - 3s 56ms/step - loss: 0.3265 - val\_loss: 0.4387

Epoch 12/100

50/50 [=====] - 3s 53ms/step - loss: 0.3224 - val\_loss: 0.4253

Epoch 13/100

50/50 [=====] - 3s 54ms/step - loss: 0.3168 - val\_loss: 0.4313

Epoch 14/100

50/50 [=====] - 3s 54ms/step - loss: 0.3144 - val\_loss: 0.4169

Epoch 15/100

50/50 [=====] - 3s 55ms/step - loss: 0.3076 - val\_loss: 0.4015

Epoch 16/100

50/50 [=====] - 3s 54ms/step - loss: 0.3061 - val\_loss: 0.4275

Epoch 17/100

50/50 [=====] - 3s 55ms/step - loss: 0.2991 - val\_loss: 0.4170

Epoch 18/100

50/50 [=====] - 3s 56ms/step - loss: 0.3024 - val\_loss: 0.4226

Epoch 19/100

50/50 [=====] - 3s 55ms/step - loss: 0.2932 - val\_loss: 0.4402

Epoch 20/100

50/50 [=====] - 3s 54ms/step - loss: 0.2934 - val\_loss: 0.4324

Epoch 21/100

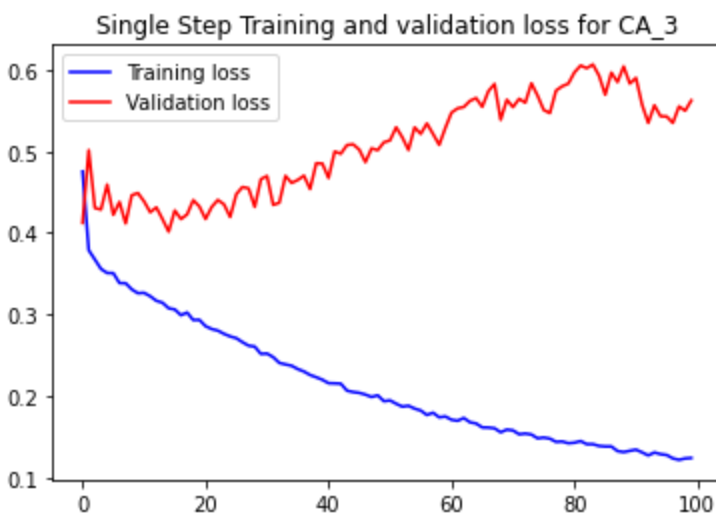
50/50 [=====] - 3s 54ms/step - loss: 0.2857 - val\_loss: 0.4171

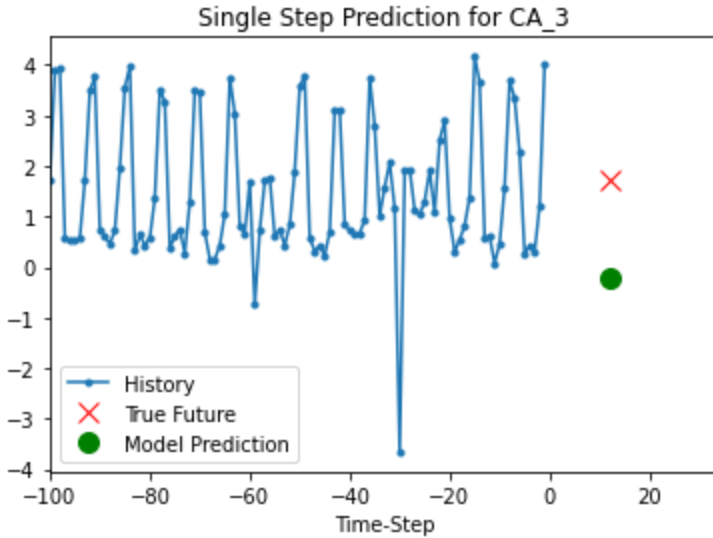
Epoch 22/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2821 - val\_loss: 0.4318  
Epoch 23/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2802 - val\_loss: 0.4404  
Epoch 24/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2762 - val\_loss: 0.4350  
Epoch 25/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2731 - val\_loss: 0.4195  
Epoch 26/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2709 - val\_loss: 0.4475  
Epoch 27/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2660 - val\_loss: 0.4562  
Epoch 28/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2617 - val\_loss: 0.4547  
Epoch 29/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2606 - val\_loss: 0.4319  
Epoch 30/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2516 - val\_loss: 0.4659  
Epoch 31/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2521 - val\_loss: 0.4698  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2477 - val\_loss: 0.4343  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2406 - val\_loss: 0.4369  
Epoch 34/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2388 - val\_loss: 0.4699  
Epoch 35/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2371 - val\_loss: 0.4613  
Epoch 36/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2330 - val\_loss: 0.4649  
Epoch 37/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2301 - val\_loss: 0.4702  
Epoch 38/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2258 - val\_loss: 0.4538  
Epoch 39/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2230 - val\_loss: 0.4854  
Epoch 40/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2199 - val\_loss: 0.4850  
Epoch 41/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2157 - val\_loss: 0.4673  
Epoch 42/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2155 - val\_loss: 0.4997  
Epoch 43/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2151 - val\_loss: 0.4971  
Epoch 44/100

50/50 [=====] - 3s 50ms/step - loss: 0.2066 - val\_loss: 0.5077  
Epoch 45/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2049 - val\_loss: 0.5086  
Epoch 46/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2039 - val\_loss: 0.5022  
Epoch 47/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2017 - val\_loss: 0.4868  
Epoch 48/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1988 - val\_loss: 0.5037  
Epoch 49/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2009 - val\_loss: 0.5014  
Epoch 50/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1936 - val\_loss: 0.5111  
Epoch 51/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1946 - val\_loss: 0.5134  
Epoch 52/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1905 - val\_loss: 0.5296  
Epoch 53/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1870 - val\_loss: 0.5172  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1880 - val\_loss: 0.5017  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1846 - val\_loss: 0.5294  
Epoch 56/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1822 - val\_loss: 0.5214  
Epoch 57/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1767 - val\_loss: 0.5342  
Epoch 58/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1795 - val\_loss: 0.5213  
Epoch 59/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1739 - val\_loss: 0.5080  
Epoch 60/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1749 - val\_loss: 0.5287  
Epoch 61/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1709 - val\_loss: 0.5475  
Epoch 62/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1696 - val\_loss: 0.5527  
Epoch 63/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1731 - val\_loss: 0.5544  
Epoch 64/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1678 - val\_loss: 0.5618  
Epoch 65/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1663 - val\_loss: 0.5654  
Epoch 66/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1615 - val\_loss: 0.5546

Epoch 67/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1613 - val\_loss: 0.5737  
Epoch 68/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1604 - val\_loss: 0.5826  
Epoch 69/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1555 - val\_loss: 0.5387  
Epoch 70/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1588 - val\_loss: 0.5633  
Epoch 71/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1578 - val\_loss: 0.5543  
Epoch 72/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1531 - val\_loss: 0.5644  
Epoch 73/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1539 - val\_loss: 0.5597  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1528 - val\_loss: 0.5834  
Epoch 75/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1481 - val\_loss: 0.5683  
Epoch 76/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1490 - val\_loss: 0.5507  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1478 - val\_loss: 0.5469  
Epoch 78/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1438 - val\_loss: 0.5745  
Epoch 79/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1442 - val\_loss: 0.5798  
Epoch 80/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1421 - val\_loss: 0.5830  
Epoch 81/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1428 - val\_loss: 0.5969  
Epoch 82/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1447 - val\_loss: 0.6052  
Epoch 83/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1410 - val\_loss: 0.6019  
Epoch 84/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1409 - val\_loss: 0.6065  
Epoch 85/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1388 - val\_loss: 0.5928  
Epoch 86/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1382 - val\_loss: 0.5694  
Epoch 87/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1382 - val\_loss: 0.5965  
Epoch 88/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1325 - val\_loss: 0.5850  
Epoch 89/100

50/50 [=====] - 3s 50ms/step - loss: 0.1313 - val\_loss: 0.6041  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1328 - val\_loss: 0.5830  
Epoch 91/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1342 - val\_loss: 0.5901  
Epoch 92/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1309 - val\_loss: 0.5571  
Epoch 93/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1271 - val\_loss: 0.5349  
Epoch 94/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1308 - val\_loss: 0.5565  
Epoch 95/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1287 - val\_loss: 0.5431  
Epoch 96/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1277 - val\_loss: 0.5427  
Epoch 97/100  
50/50 [=====] - 4s 74ms/step - loss: 0.1235 - val\_loss: 0.5348  
Epoch 98/100  
50/50 [=====] - 4s 74ms/step - loss: 0.1218 - val\_loss: 0.5551  
Epoch 99/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1234 - val\_loss: 0.5498  
Epoch 100/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1240 - val\_loss: 0.5625





CA\_3 - True Future: 7921

CA\_3 - Model Prediction: 5583

CA\_3 - Model Percentage Error: 29.52%

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Training for CA\_4

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 57ms/step - loss: 0.4661 - val\_loss: 0.4010

Epoch 2/100

50/50 [=====] - 2s 50ms/step - loss: 0.3770 - val\_loss: 0.4244

Epoch 3/100

50/50 [=====] - 2s 50ms/step - loss: 0.3667 - val\_loss: 0.4062

Epoch 4/100

50/50 [=====] - 3s 50ms/step - loss: 0.3617 - val\_loss: 0.3928

Epoch 5/100

50/50 [=====] - 3s 50ms/step - loss: 0.3530 - val\_loss: 0.3813

Epoch 6/100

50/50 [=====] - 3s 51ms/step - loss: 0.3519 - val\_loss: 0.4101

Epoch 7/100

50/50 [=====] - 3s 51ms/step - loss: 0.3478 - val\_loss: 0.3900

Epoch 8/100

50/50 [=====] - 3s 51ms/step - loss: 0.3423 - val\_loss: 0.3806

Epoch 9/100

50/50 [=====] - 3s 50ms/step - loss: 0.3413 - val\_loss: 0.3840

Epoch 10/100

50/50 [=====] - 2s 50ms/step - loss: 0.3345 - val\_loss: 0.3939

Epoch 11/100

50/50 [=====] - 3s 50ms/step - loss: 0.3306 - val\_loss: 0.3907

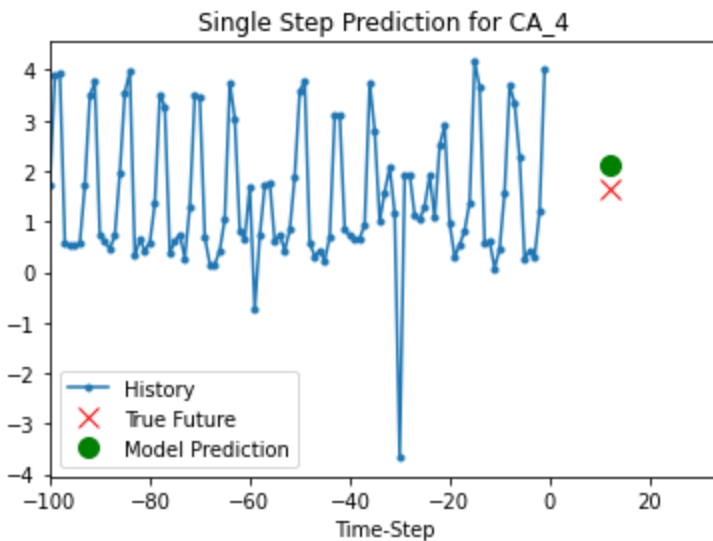
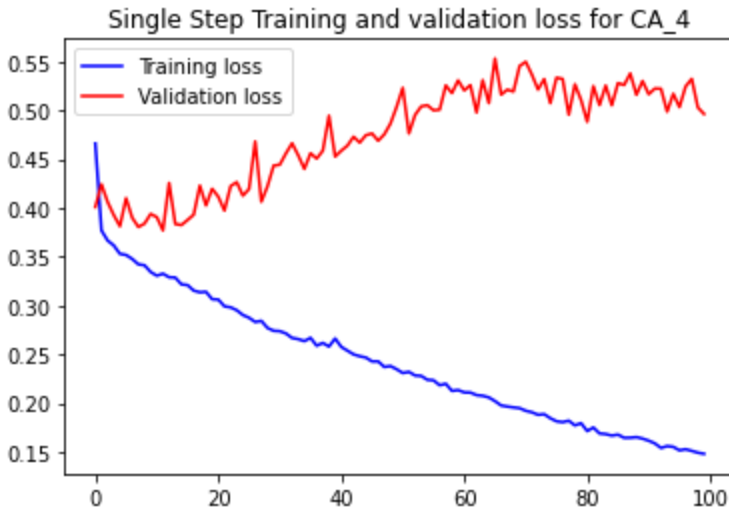
Epoch 12/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3327 - val\_loss: 0.3771  
Epoch 13/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3291 - val\_loss: 0.4257  
Epoch 14/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3288 - val\_loss: 0.3837  
Epoch 15/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3218 - val\_loss: 0.3826  
Epoch 16/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3210 - val\_loss: 0.3877  
Epoch 17/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3154 - val\_loss: 0.3932  
Epoch 18/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3137 - val\_loss: 0.4230  
Epoch 19/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3142 - val\_loss: 0.4027  
Epoch 20/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3066 - val\_loss: 0.4198  
Epoch 21/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3062 - val\_loss: 0.4116  
Epoch 22/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2993 - val\_loss: 0.3974  
Epoch 23/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2982 - val\_loss: 0.4224  
Epoch 24/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2953 - val\_loss: 0.4265  
Epoch 25/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2904 - val\_loss: 0.4126  
Epoch 26/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2876 - val\_loss: 0.4195  
Epoch 27/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2832 - val\_loss: 0.4682  
Epoch 28/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2844 - val\_loss: 0.4064  
Epoch 29/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2771 - val\_loss: 0.4223  
Epoch 30/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2742 - val\_loss: 0.4435  
Epoch 31/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2738 - val\_loss: 0.4444  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2715 - val\_loss: 0.4560  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2669 - val\_loss: 0.4664  
Epoch 34/100

50/50 [=====] - 3s 54ms/step - loss: 0.2657 - val\_loss: 0.4540  
Epoch 35/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2636 - val\_loss: 0.4401  
Epoch 36/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2670 - val\_loss: 0.4562  
Epoch 37/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2589 - val\_loss: 0.4507  
Epoch 38/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2617 - val\_loss: 0.4588  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2581 - val\_loss: 0.4946  
Epoch 40/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2663 - val\_loss: 0.4527  
Epoch 41/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2577 - val\_loss: 0.4588  
Epoch 42/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2538 - val\_loss: 0.4640  
Epoch 43/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2500 - val\_loss: 0.4730  
Epoch 44/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2481 - val\_loss: 0.4670  
Epoch 45/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2468 - val\_loss: 0.4746  
Epoch 46/100  
50/50 [=====] - 4s 77ms/step - loss: 0.2428 - val\_loss: 0.4764  
Epoch 47/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2428 - val\_loss: 0.4690  
Epoch 48/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2371 - val\_loss: 0.4755  
Epoch 49/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2381 - val\_loss: 0.4865  
Epoch 50/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2348 - val\_loss: 0.5037  
Epoch 51/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2309 - val\_loss: 0.5231  
Epoch 52/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2321 - val\_loss: 0.4764  
Epoch 53/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2284 - val\_loss: 0.4954  
Epoch 54/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2280 - val\_loss: 0.5042  
Epoch 55/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2240 - val\_loss: 0.5054  
Epoch 56/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2235 - val\_loss: 0.5001



Epoch 57/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2184 - val\_loss: 0.5008  
Epoch 58/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2199 - val\_loss: 0.5256  
Epoch 59/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2126 - val\_loss: 0.5177  
Epoch 60/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2135 - val\_loss: 0.5308  
Epoch 61/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2111 - val\_loss: 0.5205  
Epoch 62/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2109 - val\_loss: 0.5260  
Epoch 63/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2083 - val\_loss: 0.4979  
Epoch 64/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2076 - val\_loss: 0.5310  
Epoch 65/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2059 - val\_loss: 0.5075  
Epoch 66/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2021 - val\_loss: 0.5533  
Epoch 67/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1977 - val\_loss: 0.5162  
Epoch 68/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1966 - val\_loss: 0.5213  
Epoch 69/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1957 - val\_loss: 0.5194  
Epoch 70/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1949 - val\_loss: 0.5455  
Epoch 71/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1922 - val\_loss: 0.5499  
Epoch 72/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1907 - val\_loss: 0.5367  
Epoch 73/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1881 - val\_loss: 0.5214  
Epoch 74/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1887 - val\_loss: 0.5322  
Epoch 75/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1846 - val\_loss: 0.5074  
Epoch 76/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1815 - val\_loss: 0.5335  
Epoch 77/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1806 - val\_loss: 0.5323  
Epoch 78/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1821 - val\_loss: 0.4957  
Epoch 79/100

50/50 [=====] - 3s 55ms/step - loss: 0.1772 - val\_loss: 0.5268  
Epoch 80/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1795 - val\_loss: 0.5107  
Epoch 81/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1714 - val\_loss: 0.4884  
Epoch 82/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1751 - val\_loss: 0.5249  
Epoch 83/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1690 - val\_loss: 0.5055  
Epoch 84/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1684 - val\_loss: 0.5255  
Epoch 85/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1668 - val\_loss: 0.5053  
Epoch 86/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1678 - val\_loss: 0.5280  
Epoch 87/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1645 - val\_loss: 0.5260  
Epoch 88/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1646 - val\_loss: 0.5379  
Epoch 89/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1652 - val\_loss: 0.5161  
Epoch 90/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1637 - val\_loss: 0.5302  
Epoch 91/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1616 - val\_loss: 0.5166  
Epoch 92/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1588 - val\_loss: 0.5225  
Epoch 93/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1541 - val\_loss: 0.5222  
Epoch 94/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1561 - val\_loss: 0.4988  
Epoch 95/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1553 - val\_loss: 0.5171  
Epoch 96/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1517 - val\_loss: 0.5034  
Epoch 97/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1528 - val\_loss: 0.5245  
Epoch 98/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1511 - val\_loss: 0.5324  
Epoch 99/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1493 - val\_loss: 0.5029  
Epoch 100/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1481 - val\_loss: 0.4964



CA\_4 - True Future: 2799

CA\_4 - Model Prediction: 2994

CA\_4 - Model Percentage Error: 6.97%

=====

Training for CA\_1

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 59ms/step - loss: 0.5081 - val\_loss: 0.4441

Epoch 2/100

50/50 [=====] - 3s 50ms/step - loss: 0.3602 - val\_loss: 0.4473

Epoch 3/100

50/50 [=====] - 2s 50ms/step - loss: 0.3445 - val\_loss: 0.4623

Epoch 4/100

50/50 [=====] - 2s 49ms/step - loss: 0.3344 - val\_loss: 0.4517

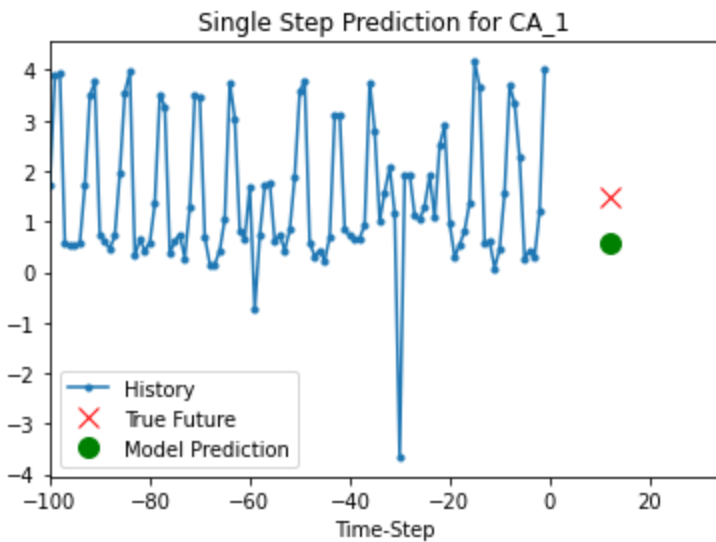
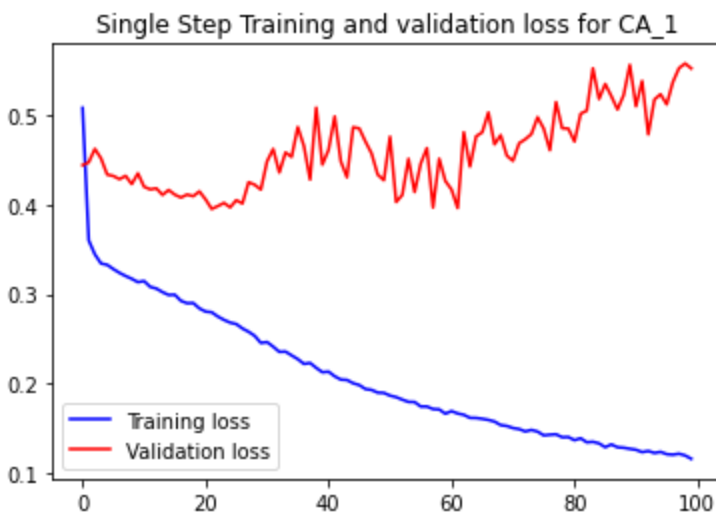
Epoch 5/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3329 - val\_loss: 0.4336  
Epoch 6/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3281 - val\_loss: 0.4320  
Epoch 7/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3239 - val\_loss: 0.4285  
Epoch 8/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3204 - val\_loss: 0.4321  
Epoch 9/100  
50/50 [=====] - 3s 65ms/step - loss: 0.3173 - val\_loss: 0.4230  
Epoch 10/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3135 - val\_loss: 0.4350  
Epoch 11/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3148 - val\_loss: 0.4200  
Epoch 12/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3082 - val\_loss: 0.4171  
Epoch 13/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3064 - val\_loss: 0.4182  
Epoch 14/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3024 - val\_loss: 0.4109  
Epoch 15/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2992 - val\_loss: 0.4164  
Epoch 16/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2995 - val\_loss: 0.4112  
Epoch 17/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2926 - val\_loss: 0.4080  
Epoch 18/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2900 - val\_loss: 0.4113  
Epoch 19/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2902 - val\_loss: 0.4094  
Epoch 20/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2842 - val\_loss: 0.4148  
Epoch 21/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2807 - val\_loss: 0.4059  
Epoch 22/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2799 - val\_loss: 0.3952  
Epoch 23/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2751 - val\_loss: 0.3984  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2714 - val\_loss: 0.4019  
Epoch 25/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2684 - val\_loss: 0.3970  
Epoch 26/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2667 - val\_loss: 0.4050  
Epoch 27/100

50/50 [=====] - 3s 53ms/step - loss: 0.2618 - val\_loss: 0.4013  
Epoch 28/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2581 - val\_loss: 0.4250  
Epoch 29/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2536 - val\_loss: 0.4222  
Epoch 30/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2457 - val\_loss: 0.4168  
Epoch 31/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2466 - val\_loss: 0.4483  
Epoch 32/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2415 - val\_loss: 0.4621  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2357 - val\_loss: 0.4359  
Epoch 34/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2360 - val\_loss: 0.4582  
Epoch 35/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2318 - val\_loss: 0.4533  
Epoch 36/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2276 - val\_loss: 0.4867  
Epoch 37/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2223 - val\_loss: 0.4655  
Epoch 38/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2233 - val\_loss: 0.4280  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2179 - val\_loss: 0.5083  
Epoch 40/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2129 - val\_loss: 0.4447  
Epoch 41/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2136 - val\_loss: 0.4610  
Epoch 42/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2085 - val\_loss: 0.4985  
Epoch 43/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2048 - val\_loss: 0.4484  
Epoch 44/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2043 - val\_loss: 0.4305  
Epoch 45/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2007 - val\_loss: 0.4864  
Epoch 46/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1987 - val\_loss: 0.4852  
Epoch 47/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1942 - val\_loss: 0.4705  
Epoch 48/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1932 - val\_loss: 0.4572  
Epoch 49/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1902 - val\_loss: 0.4335

Epoch 50/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1899 - val\_loss: 0.4273  
Epoch 51/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1869 - val\_loss: 0.4759  
Epoch 52/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1852 - val\_loss: 0.4029  
Epoch 53/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1824 - val\_loss: 0.4109  
Epoch 54/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1799 - val\_loss: 0.4512  
Epoch 55/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1797 - val\_loss: 0.4141  
Epoch 56/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1747 - val\_loss: 0.4460  
Epoch 57/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1747 - val\_loss: 0.4631  
Epoch 58/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1718 - val\_loss: 0.3968  
Epoch 59/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1715 - val\_loss: 0.4513  
Epoch 60/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1666 - val\_loss: 0.4264  
Epoch 61/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1696 - val\_loss: 0.4170  
Epoch 62/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1669 - val\_loss: 0.3962  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1655 - val\_loss: 0.4808  
Epoch 64/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1621 - val\_loss: 0.4425  
Epoch 65/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1619 - val\_loss: 0.4762  
Epoch 66/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1610 - val\_loss: 0.4808  
Epoch 67/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1597 - val\_loss: 0.5029  
Epoch 68/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1579 - val\_loss: 0.4673  
Epoch 69/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1540 - val\_loss: 0.4776  
Epoch 70/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1530 - val\_loss: 0.4547  
Epoch 71/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1507 - val\_loss: 0.4489  
Epoch 72/100

50/50 [=====] - 3s 53ms/step - loss: 0.1495 - val\_loss: 0.4685  
Epoch 73/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1469 - val\_loss: 0.4730  
Epoch 74/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1486 - val\_loss: 0.4788  
Epoch 75/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1467 - val\_loss: 0.4976  
Epoch 76/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1425 - val\_loss: 0.4849  
Epoch 77/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1432 - val\_loss: 0.4608  
Epoch 78/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1437 - val\_loss: 0.5146  
Epoch 79/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1404 - val\_loss: 0.4853  
Epoch 80/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1407 - val\_loss: 0.4849  
Epoch 81/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1371 - val\_loss: 0.4705  
Epoch 82/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1393 - val\_loss: 0.5015  
Epoch 83/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1347 - val\_loss: 0.5049  
Epoch 84/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1353 - val\_loss: 0.5522  
Epoch 85/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1335 - val\_loss: 0.5179  
Epoch 86/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1292 - val\_loss: 0.5347  
Epoch 87/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1324 - val\_loss: 0.5210  
Epoch 88/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1292 - val\_loss: 0.5063  
Epoch 89/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1287 - val\_loss: 0.5223  
Epoch 90/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1275 - val\_loss: 0.5561  
Epoch 91/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1264 - val\_loss: 0.5098  
Epoch 92/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1238 - val\_loss: 0.5381  
Epoch 93/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1251 - val\_loss: 0.4784  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1228 - val\_loss: 0.5173

Epoch 95/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.1241 - val\_loss: 0.5233  
 Epoch 96/100  
 50/50 [=====] - 3s 50ms/step - loss: 0.1215 - val\_loss: 0.5119  
 Epoch 97/100  
 50/50 [=====] - 3s 51ms/step - loss: 0.1209 - val\_loss: 0.5368  
 Epoch 98/100  
 50/50 [=====] - 3s 50ms/step - loss: 0.1220 - val\_loss: 0.5524  
 Epoch 99/100  
 50/50 [=====] - 3s 51ms/step - loss: 0.1200 - val\_loss: 0.5576  
 Epoch 100/100  
 50/50 [=====] - 2s 50ms/step - loss: 0.1163 - val\_loss: 0.5521



CA\_1 - True Future: 5483  
 CA\_1 - Model Prediction: 4570  
 CA\_1 - Model Percentage Error: 16.65%



=====  
=====

Training for CA\_2

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 61ms/step - loss: 0.4836 - val\_loss: 0.6275

Epoch 2/100

50/50 [=====] - 3s 54ms/step - loss: 0.3330 - val\_loss: 0.6002

Epoch 3/100

50/50 [=====] - 3s 55ms/step - loss: 0.3236 - val\_loss: 0.5980

Epoch 4/100

50/50 [=====] - 3s 53ms/step - loss: 0.3242 - val\_loss: 0.5963

Epoch 5/100

50/50 [=====] - 3s 53ms/step - loss: 0.3179 - val\_loss: 0.6103

Epoch 6/100

50/50 [=====] - 3s 54ms/step - loss: 0.3112 - val\_loss: 0.5934

Epoch 7/100

50/50 [=====] - 3s 54ms/step - loss: 0.3102 - val\_loss: 0.5789

Epoch 8/100

50/50 [=====] - 3s 54ms/step - loss: 0.3022 - val\_loss: 0.5803

Epoch 9/100

50/50 [=====] - 3s 53ms/step - loss: 0.3001 - val\_loss: 0.6267

Epoch 10/100

50/50 [=====] - 3s 53ms/step - loss: 0.2951 - val\_loss: 0.5960

Epoch 11/100

50/50 [=====] - 3s 53ms/step - loss: 0.2862 - val\_loss: 0.6070

Epoch 12/100

50/50 [=====] - 3s 53ms/step - loss: 0.2829 - val\_loss: 0.5799

Epoch 13/100

50/50 [=====] - 3s 54ms/step - loss: 0.2808 - val\_loss: 0.5851

Epoch 14/100

50/50 [=====] - 3s 55ms/step - loss: 0.2742 - val\_loss: 0.5746

Epoch 15/100

50/50 [=====] - 3s 54ms/step - loss: 0.2733 - val\_loss: 0.5745

Epoch 16/100

50/50 [=====] - 3s 54ms/step - loss: 0.2691 - val\_loss: 0.6363

Epoch 17/100

50/50 [=====] - 4s 73ms/step - loss: 0.2666 - val\_loss: 0.5847

Epoch 18/100

50/50 [=====] - 4s 76ms/step - loss: 0.2624 - val\_loss: 0.5682

Epoch 19/100

50/50 [=====] - 3s 53ms/step - loss: 0.2622 - val\_loss: 0.5982

Epoch 20/100

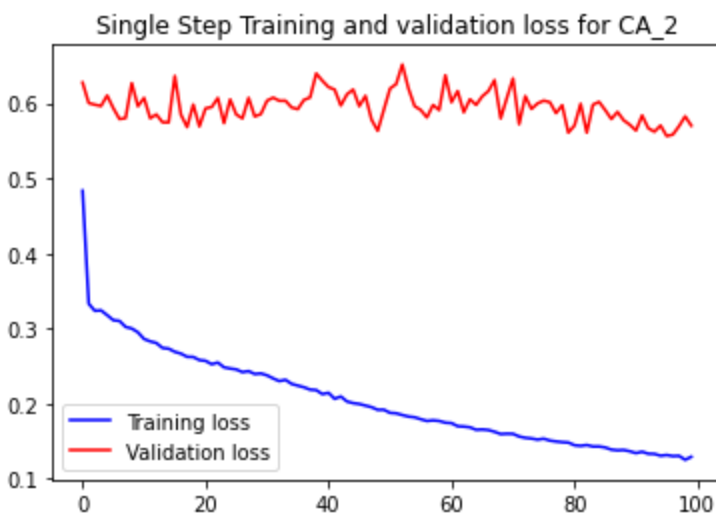
50/50 [=====] - 3s 52ms/step - loss: 0.2580 - val\_loss: 0.5691

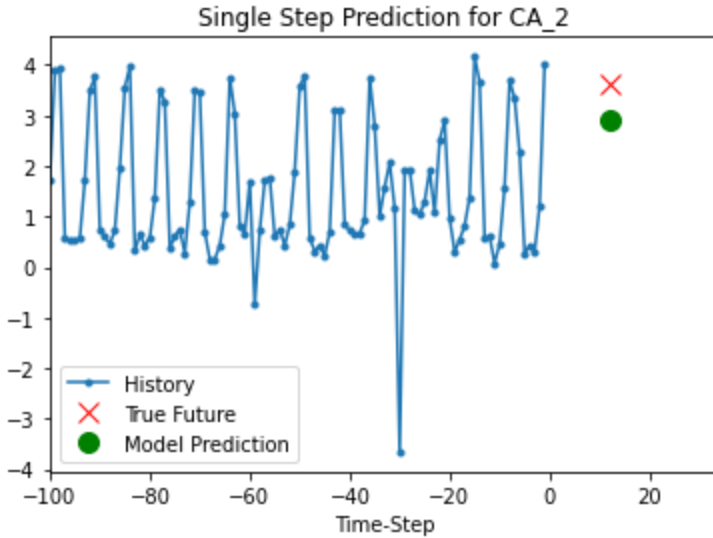
Epoch 21/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2571 - val\_loss: 0.5932  
Epoch 22/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2525 - val\_loss: 0.5948  
Epoch 23/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2548 - val\_loss: 0.6069  
Epoch 24/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2484 - val\_loss: 0.5735  
Epoch 25/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2468 - val\_loss: 0.6050  
Epoch 26/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2456 - val\_loss: 0.5849  
Epoch 27/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2420 - val\_loss: 0.5798  
Epoch 28/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2433 - val\_loss: 0.6071  
Epoch 29/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2395 - val\_loss: 0.5824  
Epoch 30/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2402 - val\_loss: 0.5856  
Epoch 31/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2377 - val\_loss: 0.6034  
Epoch 32/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2336 - val\_loss: 0.6074  
Epoch 33/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2301 - val\_loss: 0.6032  
Epoch 34/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2318 - val\_loss: 0.6033  
Epoch 35/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2263 - val\_loss: 0.5943  
Epoch 36/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2241 - val\_loss: 0.5921  
Epoch 37/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2219 - val\_loss: 0.6044  
Epoch 38/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2187 - val\_loss: 0.6076  
Epoch 39/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2181 - val\_loss: 0.6395  
Epoch 40/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2127 - val\_loss: 0.6299  
Epoch 41/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2145 - val\_loss: 0.6215  
Epoch 42/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2065 - val\_loss: 0.6181  
Epoch 43/100

50/50 [=====] - 3s 54ms/step - loss: 0.2096 - val\_loss: 0.5969  
Epoch 44/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2029 - val\_loss: 0.6118  
Epoch 45/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2008 - val\_loss: 0.6182  
Epoch 46/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1996 - val\_loss: 0.5960  
Epoch 47/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1975 - val\_loss: 0.6098  
Epoch 48/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1954 - val\_loss: 0.5780  
Epoch 49/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1918 - val\_loss: 0.5633  
Epoch 50/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1919 - val\_loss: 0.5914  
Epoch 51/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1878 - val\_loss: 0.6195  
Epoch 52/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1872 - val\_loss: 0.6255  
Epoch 53/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1849 - val\_loss: 0.6516  
Epoch 54/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1829 - val\_loss: 0.6196  
Epoch 55/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1819 - val\_loss: 0.5962  
Epoch 56/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1793 - val\_loss: 0.5909  
Epoch 57/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1770 - val\_loss: 0.5811  
Epoch 58/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1778 - val\_loss: 0.5976  
Epoch 59/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1770 - val\_loss: 0.5908  
Epoch 60/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1747 - val\_loss: 0.6372  
Epoch 61/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1741 - val\_loss: 0.6013  
Epoch 62/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1700 - val\_loss: 0.6162  
Epoch 63/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1696 - val\_loss: 0.5879  
Epoch 64/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1686 - val\_loss: 0.6053  
Epoch 65/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1653 - val\_loss: 0.5978

Epoch 66/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1657 - val\_loss: 0.6091  
Epoch 67/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1650 - val\_loss: 0.6161  
Epoch 68/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1626 - val\_loss: 0.6307  
Epoch 69/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1596 - val\_loss: 0.5798  
Epoch 70/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1600 - val\_loss: 0.6069  
Epoch 71/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1599 - val\_loss: 0.6330  
Epoch 72/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1563 - val\_loss: 0.5721  
Epoch 73/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1545 - val\_loss: 0.6094  
Epoch 74/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1537 - val\_loss: 0.5924  
Epoch 75/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1522 - val\_loss: 0.5997  
Epoch 76/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1534 - val\_loss: 0.6034  
Epoch 77/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1509 - val\_loss: 0.6014  
Epoch 78/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1497 - val\_loss: 0.5867  
Epoch 79/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1488 - val\_loss: 0.5973  
Epoch 80/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1483 - val\_loss: 0.5608  
Epoch 81/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1447 - val\_loss: 0.5703  
Epoch 82/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1439 - val\_loss: 0.5992  
Epoch 83/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1450 - val\_loss: 0.5608  
Epoch 84/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1430 - val\_loss: 0.5980  
Epoch 85/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1430 - val\_loss: 0.6018  
Epoch 86/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1417 - val\_loss: 0.5909  
Epoch 87/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1388 - val\_loss: 0.5790  
Epoch 88/100

50/50 [=====] - 3s 53ms/step - loss: 0.1380 - val\_loss: 0.5884  
Epoch 89/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1383 - val\_loss: 0.5773  
Epoch 90/100  
50/50 [=====] - 3s 55ms/step - loss: 0.1366 - val\_loss: 0.5713  
Epoch 91/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1342 - val\_loss: 0.5636  
Epoch 92/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1360 - val\_loss: 0.5837  
Epoch 93/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1334 - val\_loss: 0.5667  
Epoch 94/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1331 - val\_loss: 0.5621  
Epoch 95/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1307 - val\_loss: 0.5703  
Epoch 96/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1317 - val\_loss: 0.5563  
Epoch 97/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1302 - val\_loss: 0.5583  
Epoch 98/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1306 - val\_loss: 0.5694  
Epoch 99/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1253 - val\_loss: 0.5825  
Epoch 100/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1293 - val\_loss: 0.5701





CA\_2 - True Future: 5645

CA\_2 - Model Prediction: 5111

CA\_2 - Model Percentage Error: 9.46%

=====

Training for TX\_1

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 56ms/step - loss: 0.6188 - val\_loss: 0.5079

Epoch 2/100

50/50 [=====] - 2s 50ms/step - loss: 0.5019 - val\_loss: 0.4145

Epoch 3/100

50/50 [=====] - 2s 49ms/step - loss: 0.4545 - val\_loss: 0.3854

Epoch 4/100

50/50 [=====] - 2s 49ms/step - loss: 0.4287 - val\_loss: 0.4209

Epoch 5/100

50/50 [=====] - 2s 50ms/step - loss: 0.4218 - val\_loss: 0.4284

Epoch 6/100

50/50 [=====] - 2s 49ms/step - loss: 0.4166 - val\_loss: 0.4067

Epoch 7/100

50/50 [=====] - 2s 49ms/step - loss: 0.4099 - val\_loss: 0.4241

Epoch 8/100

50/50 [=====] - 2s 49ms/step - loss: 0.4069 - val\_loss: 0.4281

Epoch 9/100

50/50 [=====] - 3s 51ms/step - loss: 0.4009 - val\_loss: 0.4309

Epoch 10/100

50/50 [=====] - 3s 51ms/step - loss: 0.3968 - val\_loss: 0.4180

Epoch 11/100

50/50 [=====] - 3s 51ms/step - loss: 0.3934 - val\_loss: 0.4592

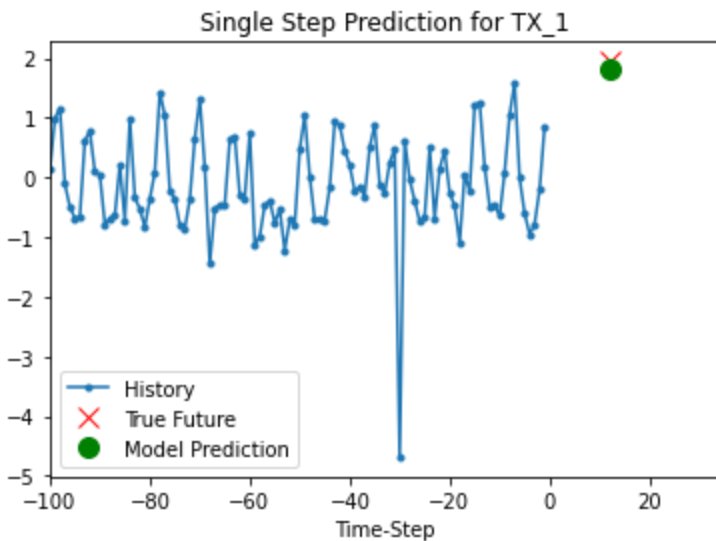
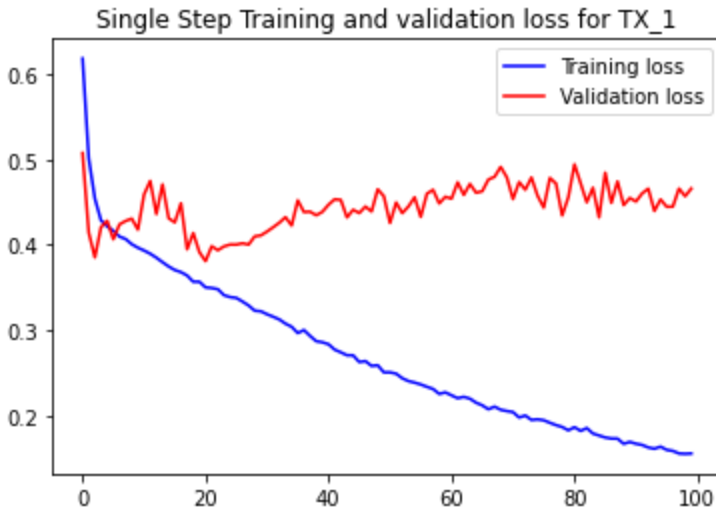
Epoch 12/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3897 - val\_loss: 0.4751  
Epoch 13/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3851 - val\_loss: 0.4363  
Epoch 14/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3798 - val\_loss: 0.4711  
Epoch 15/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3747 - val\_loss: 0.4313  
Epoch 16/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3706 - val\_loss: 0.4265  
Epoch 17/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3681 - val\_loss: 0.4489  
Epoch 18/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3641 - val\_loss: 0.3949  
Epoch 19/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3568 - val\_loss: 0.4140  
Epoch 20/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3568 - val\_loss: 0.3915  
Epoch 21/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3502 - val\_loss: 0.3810  
Epoch 22/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3495 - val\_loss: 0.3985  
Epoch 23/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3481 - val\_loss: 0.3938  
Epoch 24/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3410 - val\_loss: 0.3983  
Epoch 25/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3388 - val\_loss: 0.4005  
Epoch 26/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3379 - val\_loss: 0.4004  
Epoch 27/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3336 - val\_loss: 0.4019  
Epoch 28/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3290 - val\_loss: 0.4005  
Epoch 29/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3228 - val\_loss: 0.4101  
Epoch 30/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3221 - val\_loss: 0.4112  
Epoch 31/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3187 - val\_loss: 0.4157  
Epoch 32/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3158 - val\_loss: 0.4208  
Epoch 33/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3126 - val\_loss: 0.4261  
Epoch 34/100

50/50 [=====] - 3s 51ms/step - loss: 0.3077 - val\_loss: 0.4327  
Epoch 35/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3040 - val\_loss: 0.4228  
Epoch 36/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2966 - val\_loss: 0.4523  
Epoch 37/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3001 - val\_loss: 0.4386  
Epoch 38/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2932 - val\_loss: 0.4391  
Epoch 39/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2870 - val\_loss: 0.4348  
Epoch 40/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2858 - val\_loss: 0.4389  
Epoch 41/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2835 - val\_loss: 0.4472  
Epoch 42/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2771 - val\_loss: 0.4536  
Epoch 43/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2740 - val\_loss: 0.4528  
Epoch 44/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2706 - val\_loss: 0.4323  
Epoch 45/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2705 - val\_loss: 0.4413  
Epoch 46/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2626 - val\_loss: 0.4375  
Epoch 47/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2637 - val\_loss: 0.4451  
Epoch 48/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2580 - val\_loss: 0.4392  
Epoch 49/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2588 - val\_loss: 0.4653  
Epoch 50/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2505 - val\_loss: 0.4572  
Epoch 51/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2505 - val\_loss: 0.4258  
Epoch 52/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2489 - val\_loss: 0.4498  
Epoch 53/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2435 - val\_loss: 0.4373  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2402 - val\_loss: 0.4452  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2385 - val\_loss: 0.4559  
Epoch 56/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2363 - val\_loss: 0.4330



Epoch 57/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2335 - val\_loss: 0.4601  
Epoch 58/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2310 - val\_loss: 0.4647  
Epoch 59/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2252 - val\_loss: 0.4487  
Epoch 60/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2270 - val\_loss: 0.4565  
Epoch 61/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2236 - val\_loss: 0.4543  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2201 - val\_loss: 0.4735  
Epoch 63/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2217 - val\_loss: 0.4588  
Epoch 64/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2196 - val\_loss: 0.4717  
Epoch 65/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2149 - val\_loss: 0.4613  
Epoch 66/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2118 - val\_loss: 0.4630  
Epoch 67/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2072 - val\_loss: 0.4768  
Epoch 68/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2103 - val\_loss: 0.4799  
Epoch 69/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2066 - val\_loss: 0.4916  
Epoch 70/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2050 - val\_loss: 0.4793  
Epoch 71/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2039 - val\_loss: 0.4539  
Epoch 72/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1975 - val\_loss: 0.4739  
Epoch 73/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1998 - val\_loss: 0.4648  
Epoch 74/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1947 - val\_loss: 0.4792  
Epoch 75/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1953 - val\_loss: 0.4577  
Epoch 76/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1943 - val\_loss: 0.4438  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1913 - val\_loss: 0.4787  
Epoch 78/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1886 - val\_loss: 0.4720  
Epoch 79/100

50/50 [=====] - 3s 50ms/step - loss: 0.1864 - val\_loss: 0.4346  
Epoch 80/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1824 - val\_loss: 0.4560  
Epoch 81/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1862 - val\_loss: 0.4946  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1818 - val\_loss: 0.4724  
Epoch 83/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1851 - val\_loss: 0.4500  
Epoch 84/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1787 - val\_loss: 0.4671  
Epoch 85/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1764 - val\_loss: 0.4324  
Epoch 86/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1740 - val\_loss: 0.4848  
Epoch 87/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1728 - val\_loss: 0.4494  
Epoch 88/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1727 - val\_loss: 0.4746  
Epoch 89/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1666 - val\_loss: 0.4468  
Epoch 90/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1689 - val\_loss: 0.4551  
Epoch 91/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1667 - val\_loss: 0.4510  
Epoch 92/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1653 - val\_loss: 0.4604  
Epoch 93/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1623 - val\_loss: 0.4661  
Epoch 94/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1608 - val\_loss: 0.4399  
Epoch 95/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1633 - val\_loss: 0.4535  
Epoch 96/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1595 - val\_loss: 0.4448  
Epoch 97/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1583 - val\_loss: 0.4450  
Epoch 98/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1553 - val\_loss: 0.4662  
Epoch 99/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1549 - val\_loss: 0.4572  
Epoch 100/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1553 - val\_loss: 0.4662



TX\_1 - True Future: 4107

TX\_1 - Model Prediction: 4022

TX\_1 - Model Percentage Error: 2.07%

=====

Training for TX\_3

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 58ms/step - loss: 0.5531 - val\_loss: 0.4402

Epoch 2/100

50/50 [=====] - 2s 50ms/step - loss: 0.4430 - val\_loss: 0.4167

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.4181 - val\_loss: 0.4286

Epoch 4/100

50/50 [=====] - 3s 51ms/step - loss: 0.4056 - val\_loss: 0.3891

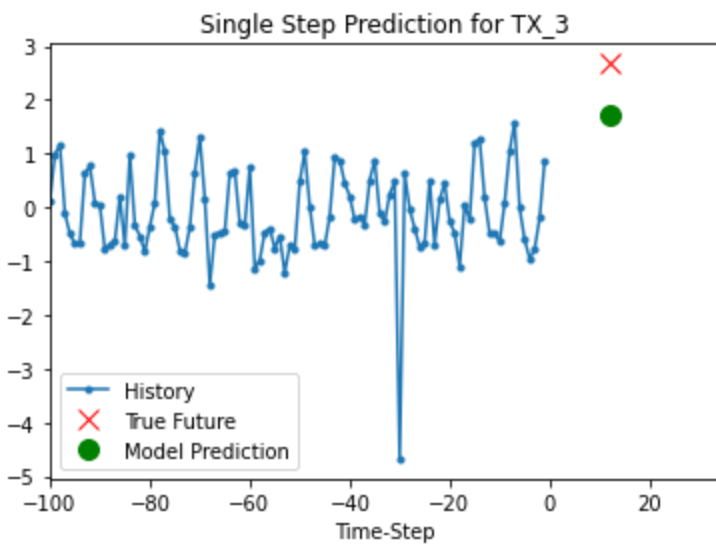
Epoch 5/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3980 - val\_loss: 0.4056  
Epoch 6/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3968 - val\_loss: 0.3844  
Epoch 7/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3905 - val\_loss: 0.3835  
Epoch 8/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3860 - val\_loss: 0.3908  
Epoch 9/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3815 - val\_loss: 0.3657  
Epoch 10/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3756 - val\_loss: 0.4030  
Epoch 11/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3731 - val\_loss: 0.3862  
Epoch 12/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3683 - val\_loss: 0.3640  
Epoch 13/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3650 - val\_loss: 0.3840  
Epoch 14/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3617 - val\_loss: 0.6226  
Epoch 15/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3574 - val\_loss: 0.4411  
Epoch 16/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3490 - val\_loss: 0.3774  
Epoch 17/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3496 - val\_loss: 0.4765  
Epoch 18/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3390 - val\_loss: 0.3670  
Epoch 19/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3403 - val\_loss: 0.3687  
Epoch 20/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3364 - val\_loss: 0.3786  
Epoch 21/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3306 - val\_loss: 0.3979  
Epoch 22/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3224 - val\_loss: 0.3837  
Epoch 23/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3186 - val\_loss: 0.3503  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3164 - val\_loss: 0.3781  
Epoch 25/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3145 - val\_loss: 0.3902  
Epoch 26/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3099 - val\_loss: 0.3440  
Epoch 27/100

50/50 [=====] - 3s 55ms/step - loss: 0.3031 - val\_loss: 0.3823  
Epoch 28/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2989 - val\_loss: 0.3512  
Epoch 29/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2994 - val\_loss: 0.3447  
Epoch 30/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2960 - val\_loss: 0.3528  
Epoch 31/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2884 - val\_loss: 0.3583  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2862 - val\_loss: 0.3633  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2860 - val\_loss: 0.3593  
Epoch 34/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2839 - val\_loss: 0.3780  
Epoch 35/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2821 - val\_loss: 0.3874  
Epoch 36/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2729 - val\_loss: 0.3690  
Epoch 37/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2763 - val\_loss: 0.3680  
Epoch 38/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2687 - val\_loss: 0.3793  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2704 - val\_loss: 0.3797  
Epoch 40/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2668 - val\_loss: 0.3680  
Epoch 41/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2623 - val\_loss: 0.3826  
Epoch 42/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2631 - val\_loss: 0.3848  
Epoch 43/100  
50/50 [=====] - 4s 79ms/step - loss: 0.2584 - val\_loss: 0.3942  
Epoch 44/100  
50/50 [=====] - 4s 76ms/step - loss: 0.2544 - val\_loss: 0.4049  
Epoch 45/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2568 - val\_loss: 0.3954  
Epoch 46/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2514 - val\_loss: 0.3987  
Epoch 47/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2512 - val\_loss: 0.3956  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2449 - val\_loss: 0.3914  
Epoch 49/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2422 - val\_loss: 0.3930

Epoch 50/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2429 - val\_loss: 0.4089  
Epoch 51/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2409 - val\_loss: 0.3983  
Epoch 52/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2375 - val\_loss: 0.3940  
Epoch 53/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2378 - val\_loss: 0.3903  
Epoch 54/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2363 - val\_loss: 0.4251  
Epoch 55/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2391 - val\_loss: 0.3931  
Epoch 56/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2280 - val\_loss: 0.4317  
Epoch 57/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2335 - val\_loss: 0.4308  
Epoch 58/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2279 - val\_loss: 0.4041  
Epoch 59/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2260 - val\_loss: 0.4738  
Epoch 60/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2268 - val\_loss: 0.4122  
Epoch 61/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2226 - val\_loss: 0.4470  
Epoch 62/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2223 - val\_loss: 0.4646  
Epoch 63/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2168 - val\_loss: 0.4546  
Epoch 64/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2218 - val\_loss: 0.4613  
Epoch 65/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2170 - val\_loss: 0.4432  
Epoch 66/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2140 - val\_loss: 0.4519  
Epoch 67/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2121 - val\_loss: 0.4695  
Epoch 68/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2112 - val\_loss: 0.4797  
Epoch 69/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2106 - val\_loss: 0.4902  
Epoch 70/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2083 - val\_loss: 0.4774  
Epoch 71/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2083 - val\_loss: 0.4878  
Epoch 72/100

50/50 [=====] - 3s 52ms/step - loss: 0.2047 - val\_loss: 0.5003  
Epoch 73/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1996 - val\_loss: 0.4823  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2019 - val\_loss: 0.4659  
Epoch 75/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2021 - val\_loss: 0.4806  
Epoch 76/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1936 - val\_loss: 0.4932  
Epoch 77/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1926 - val\_loss: 0.5157  
Epoch 78/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1950 - val\_loss: 0.5037  
Epoch 79/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1888 - val\_loss: 0.5150  
Epoch 80/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1899 - val\_loss: 0.5407  
Epoch 81/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1899 - val\_loss: 0.5081  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1831 - val\_loss: 0.5316  
Epoch 83/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1859 - val\_loss: 0.5119  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1811 - val\_loss: 0.5374  
Epoch 85/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1804 - val\_loss: 0.5251  
Epoch 86/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1803 - val\_loss: 0.5204  
Epoch 87/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1750 - val\_loss: 0.5226  
Epoch 88/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1761 - val\_loss: 0.4981  
Epoch 89/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1776 - val\_loss: 0.5135  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1736 - val\_loss: 0.5120  
Epoch 91/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1705 - val\_loss: 0.5184  
Epoch 92/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1697 - val\_loss: 0.4884  
Epoch 93/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1692 - val\_loss: 0.5144  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1679 - val\_loss: 0.5264

Epoch 95/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.1652 - val\_loss: 0.4803  
 Epoch 96/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.1637 - val\_loss: 0.5127  
 Epoch 97/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.1610 - val\_loss: 0.5398  
 Epoch 98/100  
 50/50 [=====] - 3s 53ms/step - loss: 0.1603 - val\_loss: 0.5145  
 Epoch 99/100  
 50/50 [=====] - 3s 53ms/step - loss: 0.1608 - val\_loss: 0.5056  
 Epoch 100/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.1570 - val\_loss: 0.5293



TX\_3 - True Future: 4929  
 TX\_3 - Model Prediction: 4281  
 TX\_3 - Model Percentage Error: 13.15%



=====

Training for TX\_2

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 56ms/step - loss: 0.5551 - val\_loss: 0.4210

Epoch 2/100

50/50 [=====] - 2s 49ms/step - loss: 0.4429 - val\_loss: 0.4211

Epoch 3/100

50/50 [=====] - 2s 49ms/step - loss: 0.4240 - val\_loss: 0.4411

Epoch 4/100

50/50 [=====] - 2s 49ms/step - loss: 0.4181 - val\_loss: 0.4157

Epoch 5/100

50/50 [=====] - 2s 49ms/step - loss: 0.4079 - val\_loss: 0.4527

Epoch 6/100

50/50 [=====] - 2s 49ms/step - loss: 0.4063 - val\_loss: 0.4602

Epoch 7/100

50/50 [=====] - 2s 49ms/step - loss: 0.4000 - val\_loss: 0.4072

Epoch 8/100

50/50 [=====] - 2s 49ms/step - loss: 0.3954 - val\_loss: 0.3960

Epoch 9/100

50/50 [=====] - 2s 50ms/step - loss: 0.3905 - val\_loss: 0.4208

Epoch 10/100

50/50 [=====] - 2s 49ms/step - loss: 0.3854 - val\_loss: 0.4024

Epoch 11/100

50/50 [=====] - 3s 50ms/step - loss: 0.3826 - val\_loss: 0.4466

Epoch 12/100

50/50 [=====] - 2s 49ms/step - loss: 0.3775 - val\_loss: 0.4196

Epoch 13/100

50/50 [=====] - 2s 50ms/step - loss: 0.3720 - val\_loss: 0.5010

Epoch 14/100

50/50 [=====] - 3s 50ms/step - loss: 0.3677 - val\_loss: 0.4865

Epoch 15/100

50/50 [=====] - 3s 50ms/step - loss: 0.3614 - val\_loss: 0.3994

Epoch 16/100

50/50 [=====] - 2s 49ms/step - loss: 0.3594 - val\_loss: 0.4341

Epoch 17/100

50/50 [=====] - 2s 50ms/step - loss: 0.3523 - val\_loss: 0.4211

Epoch 18/100

50/50 [=====] - 3s 50ms/step - loss: 0.3470 - val\_loss: 0.4268

Epoch 19/100

50/50 [=====] - 2s 50ms/step - loss: 0.3423 - val\_loss: 0.4233

Epoch 20/100

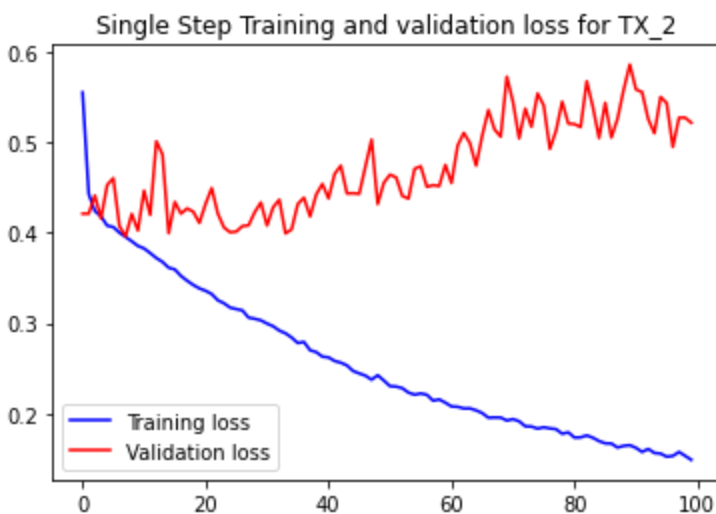
50/50 [=====] - 2s 49ms/step - loss: 0.3384 - val\_loss: 0.4108

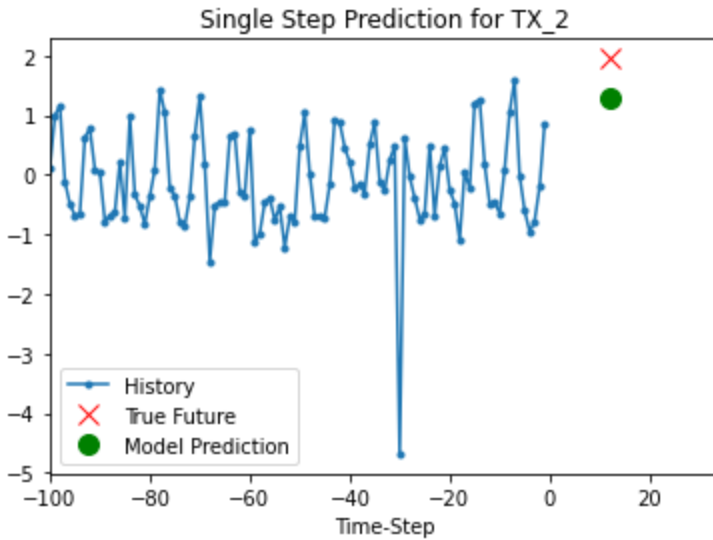
Epoch 21/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3358 - val\_loss: 0.4317  
Epoch 22/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3323 - val\_loss: 0.4493  
Epoch 23/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3254 - val\_loss: 0.4211  
Epoch 24/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3220 - val\_loss: 0.4058  
Epoch 25/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3172 - val\_loss: 0.4005  
Epoch 26/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3156 - val\_loss: 0.4012  
Epoch 27/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3141 - val\_loss: 0.4074  
Epoch 28/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3062 - val\_loss: 0.4082  
Epoch 29/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3049 - val\_loss: 0.4228  
Epoch 30/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3031 - val\_loss: 0.4334  
Epoch 31/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2996 - val\_loss: 0.4080  
Epoch 32/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2966 - val\_loss: 0.4282  
Epoch 33/100  
50/50 [=====] - 2s 48ms/step - loss: 0.2918 - val\_loss: 0.4365  
Epoch 34/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2889 - val\_loss: 0.3992  
Epoch 35/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2842 - val\_loss: 0.4037  
Epoch 36/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2780 - val\_loss: 0.4317  
Epoch 37/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2793 - val\_loss: 0.4387  
Epoch 38/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2701 - val\_loss: 0.4180  
Epoch 39/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2680 - val\_loss: 0.4422  
Epoch 40/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2630 - val\_loss: 0.4539  
Epoch 41/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2622 - val\_loss: 0.4379  
Epoch 42/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2582 - val\_loss: 0.4650  
Epoch 43/100

50/50 [=====] - 3s 50ms/step - loss: 0.2563 - val\_loss: 0.4741  
Epoch 44/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2533 - val\_loss: 0.4434  
Epoch 45/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2471 - val\_loss: 0.4436  
Epoch 46/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2445 - val\_loss: 0.4430  
Epoch 47/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2420 - val\_loss: 0.4732  
Epoch 48/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2376 - val\_loss: 0.5030  
Epoch 49/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2425 - val\_loss: 0.4317  
Epoch 50/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2366 - val\_loss: 0.4552  
Epoch 51/100  
50/50 [=====] - 2s 48ms/step - loss: 0.2304 - val\_loss: 0.4642  
Epoch 52/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2299 - val\_loss: 0.4611  
Epoch 53/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2282 - val\_loss: 0.4407  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2233 - val\_loss: 0.4377  
Epoch 55/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2210 - val\_loss: 0.4707  
Epoch 56/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2223 - val\_loss: 0.4735  
Epoch 57/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2208 - val\_loss: 0.4507  
Epoch 58/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2144 - val\_loss: 0.4526  
Epoch 59/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2157 - val\_loss: 0.4515  
Epoch 60/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2122 - val\_loss: 0.4750  
Epoch 61/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2080 - val\_loss: 0.4550  
Epoch 62/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2076 - val\_loss: 0.4963  
Epoch 63/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2058 - val\_loss: 0.5104  
Epoch 64/100  
50/50 [=====] - 2s 48ms/step - loss: 0.2058 - val\_loss: 0.4990  
Epoch 65/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2037 - val\_loss: 0.4742

Epoch 66/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2006 - val\_loss: 0.5074  
Epoch 67/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1955 - val\_loss: 0.5356  
Epoch 68/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1958 - val\_loss: 0.5141  
Epoch 69/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1957 - val\_loss: 0.5062  
Epoch 70/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1924 - val\_loss: 0.5725  
Epoch 71/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1939 - val\_loss: 0.5447  
Epoch 72/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1916 - val\_loss: 0.5043  
Epoch 73/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1860 - val\_loss: 0.5372  
Epoch 74/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1858 - val\_loss: 0.5171  
Epoch 75/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1834 - val\_loss: 0.5538  
Epoch 76/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1850 - val\_loss: 0.5407  
Epoch 77/100  
50/50 [=====] - 5s 105ms/step - loss: 0.1837 - val\_loss: 0.4926  
Epoch 78/100  
50/50 [=====] - 3s 67ms/step - loss: 0.1829 - val\_loss: 0.5126  
Epoch 79/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1778 - val\_loss: 0.5449  
Epoch 80/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1794 - val\_loss: 0.5207  
Epoch 81/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1736 - val\_loss: 0.5200  
Epoch 82/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1738 - val\_loss: 0.5168  
Epoch 83/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1759 - val\_loss: 0.5674  
Epoch 84/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1734 - val\_loss: 0.5388  
Epoch 85/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1697 - val\_loss: 0.5046  
Epoch 86/100  
50/50 [=====] - 3s 59ms/step - loss: 0.1672 - val\_loss: 0.5436  
Epoch 87/100  
50/50 [=====] - 3s 59ms/step - loss: 0.1670 - val\_loss: 0.5052  
Epoch 88/100

50/50 [=====] - 3s 58ms/step - loss: 0.1625 - val\_loss: 0.5259  
Epoch 89/100  
50/50 [=====] - 3s 67ms/step - loss: 0.1644 - val\_loss: 0.5580  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1651 - val\_loss: 0.5860  
Epoch 91/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1622 - val\_loss: 0.5584  
Epoch 92/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1577 - val\_loss: 0.5554  
Epoch 93/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1610 - val\_loss: 0.5255  
Epoch 94/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1565 - val\_loss: 0.5099  
Epoch 95/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1559 - val\_loss: 0.5501  
Epoch 96/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1524 - val\_loss: 0.5433  
Epoch 97/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1533 - val\_loss: 0.4948  
Epoch 98/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1577 - val\_loss: 0.5271  
Epoch 99/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1533 - val\_loss: 0.5272  
Epoch 100/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1490 - val\_loss: 0.5216





TX\_2 - True Future: 5327

TX\_2 - Model Prediction: 4797

TX\_2 - Model Percentage Error: 9.95%

=====  
=====

Training for WI\_1

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 66ms/step - loss: 0.4504 - val\_loss: 0.5286

Epoch 2/100

50/50 [=====] - 3s 51ms/step - loss: 0.3292 - val\_loss: 0.4381

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.3109 - val\_loss: 0.3971

Epoch 4/100

50/50 [=====] - 3s 52ms/step - loss: 0.3001 - val\_loss: 0.4035

Epoch 5/100

50/50 [=====] - 3s 51ms/step - loss: 0.2938 - val\_loss: 0.4009

Epoch 6/100

50/50 [=====] - 3s 50ms/step - loss: 0.2904 - val\_loss: 0.4317

Epoch 7/100

50/50 [=====] - 3s 51ms/step - loss: 0.2876 - val\_loss: 0.4225

Epoch 8/100

50/50 [=====] - 2s 48ms/step - loss: 0.2832 - val\_loss: 0.3841

Epoch 9/100

50/50 [=====] - 2s 50ms/step - loss: 0.2842 - val\_loss: 0.4163

Epoch 10/100

50/50 [=====] - 2s 49ms/step - loss: 0.2762 - val\_loss: 0.3706

Epoch 11/100

50/50 [=====] - 2s 50ms/step - loss: 0.2766 - val\_loss: 0.3816

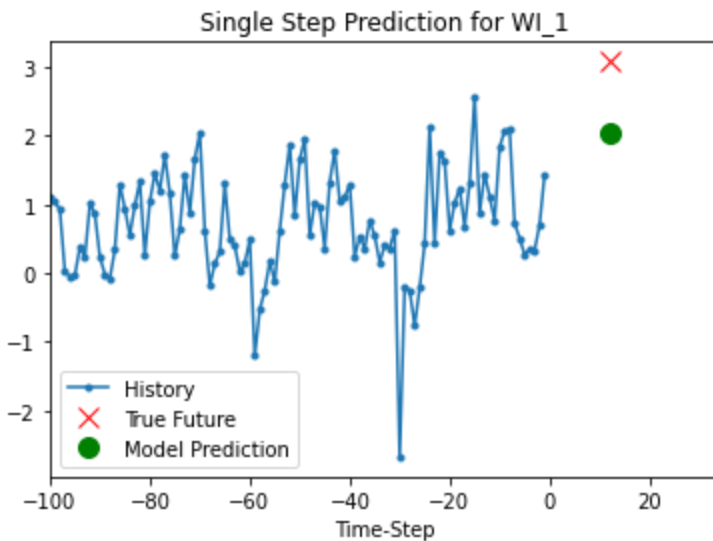
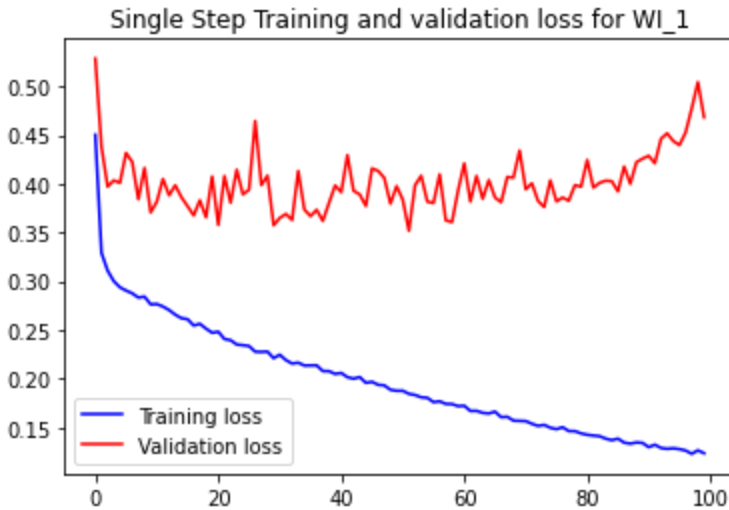
Epoch 12/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2740 - val\_loss: 0.4049  
Epoch 13/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2704 - val\_loss: 0.3882  
Epoch 14/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2657 - val\_loss: 0.3985  
Epoch 15/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2621 - val\_loss: 0.3862  
Epoch 16/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2611 - val\_loss: 0.3771  
Epoch 17/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2545 - val\_loss: 0.3675  
Epoch 18/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2563 - val\_loss: 0.3831  
Epoch 19/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2514 - val\_loss: 0.3657  
Epoch 20/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2471 - val\_loss: 0.4076  
Epoch 21/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2482 - val\_loss: 0.3578  
Epoch 22/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2407 - val\_loss: 0.4080  
Epoch 23/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2395 - val\_loss: 0.3806  
Epoch 24/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2351 - val\_loss: 0.4145  
Epoch 25/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2344 - val\_loss: 0.3891  
Epoch 26/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2335 - val\_loss: 0.3939  
Epoch 27/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2277 - val\_loss: 0.4645  
Epoch 28/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2275 - val\_loss: 0.3987  
Epoch 29/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2278 - val\_loss: 0.4084  
Epoch 30/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2210 - val\_loss: 0.3574  
Epoch 31/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2246 - val\_loss: 0.3650  
Epoch 32/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2191 - val\_loss: 0.3690  
Epoch 33/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2155 - val\_loss: 0.3628  
Epoch 34/100

50/50 [=====] - 2s 50ms/step - loss: 0.2164 - val\_loss: 0.4132  
Epoch 35/100  
50/50 [=====] - 2s 49ms/step - loss: 0.2135 - val\_loss: 0.3735  
Epoch 36/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2136 - val\_loss: 0.3668  
Epoch 37/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2137 - val\_loss: 0.3734  
Epoch 38/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2078 - val\_loss: 0.3619  
Epoch 39/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2077 - val\_loss: 0.3802  
Epoch 40/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2049 - val\_loss: 0.3983  
Epoch 41/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2058 - val\_loss: 0.3914  
Epoch 42/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2015 - val\_loss: 0.4295  
Epoch 43/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2000 - val\_loss: 0.3929  
Epoch 44/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2017 - val\_loss: 0.3891  
Epoch 45/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1957 - val\_loss: 0.3772  
Epoch 46/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1968 - val\_loss: 0.4158  
Epoch 47/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1937 - val\_loss: 0.4132  
Epoch 48/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1931 - val\_loss: 0.4060  
Epoch 49/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1886 - val\_loss: 0.3796  
Epoch 50/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1876 - val\_loss: 0.3976  
Epoch 51/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1876 - val\_loss: 0.3837  
Epoch 52/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1844 - val\_loss: 0.3518  
Epoch 53/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1832 - val\_loss: 0.3986  
Epoch 54/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1809 - val\_loss: 0.4082  
Epoch 55/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1803 - val\_loss: 0.3817  
Epoch 56/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1759 - val\_loss: 0.3803



Epoch 57/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1768 - val\_loss: 0.4098  
Epoch 58/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1741 - val\_loss: 0.3625  
Epoch 59/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1739 - val\_loss: 0.3606  
Epoch 60/100  
50/50 [=====] - 2s 48ms/step - loss: 0.1718 - val\_loss: 0.3931  
Epoch 61/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1722 - val\_loss: 0.4209  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1669 - val\_loss: 0.3818  
Epoch 63/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1670 - val\_loss: 0.4080  
Epoch 64/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1649 - val\_loss: 0.3847  
Epoch 65/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1643 - val\_loss: 0.4038  
Epoch 66/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1662 - val\_loss: 0.3860  
Epoch 67/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1605 - val\_loss: 0.3811  
Epoch 68/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1609 - val\_loss: 0.4070  
Epoch 69/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1570 - val\_loss: 0.4063  
Epoch 70/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1567 - val\_loss: 0.4342  
Epoch 71/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1564 - val\_loss: 0.3943  
Epoch 72/100  
50/50 [=====] - 3s 56ms/step - loss: 0.1537 - val\_loss: 0.4005  
Epoch 73/100  
50/50 [=====] - 4s 85ms/step - loss: 0.1515 - val\_loss: 0.3825  
Epoch 74/100  
50/50 [=====] - 3s 63ms/step - loss: 0.1526 - val\_loss: 0.3761  
Epoch 75/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1496 - val\_loss: 0.4035  
Epoch 76/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1482 - val\_loss: 0.3819  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1502 - val\_loss: 0.3859  
Epoch 78/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1462 - val\_loss: 0.3826  
Epoch 79/100

50/50 [=====] - 3s 52ms/step - loss: 0.1461 - val\_loss: 0.3986  
Epoch 80/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1438 - val\_loss: 0.3970  
Epoch 81/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1424 - val\_loss: 0.4245  
Epoch 82/100  
50/50 [=====] - 2s 49ms/step - loss: 0.1416 - val\_loss: 0.3961  
Epoch 83/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1410 - val\_loss: 0.4010  
Epoch 84/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1385 - val\_loss: 0.4032  
Epoch 85/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1369 - val\_loss: 0.4027  
Epoch 86/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1385 - val\_loss: 0.3922  
Epoch 87/100  
50/50 [=====] - 3s 50ms/step - loss: 0.1344 - val\_loss: 0.4177  
Epoch 88/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1333 - val\_loss: 0.4000  
Epoch 89/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1345 - val\_loss: 0.4222  
Epoch 90/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1341 - val\_loss: 0.4258  
Epoch 91/100  
50/50 [=====] - 2s 50ms/step - loss: 0.1297 - val\_loss: 0.4287  
Epoch 92/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1322 - val\_loss: 0.4211  
Epoch 93/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1288 - val\_loss: 0.4462  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1280 - val\_loss: 0.4518  
Epoch 95/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1285 - val\_loss: 0.4439  
Epoch 96/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1277 - val\_loss: 0.4397  
Epoch 97/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1263 - val\_loss: 0.4527  
Epoch 98/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1229 - val\_loss: 0.4774  
Epoch 99/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1265 - val\_loss: 0.5044  
Epoch 100/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1235 - val\_loss: 0.4683



WI\_1 - True Future: 5490

WI\_1 - Model Prediction: 4512

WI\_1 - Model Percentage Error: 17.81%

=====

Training for WI\_3

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 60ms/step - loss: 0.6187 - val\_loss: 0.5233

Epoch 2/100

50/50 [=====] - 3s 53ms/step - loss: 0.4560 - val\_loss: 0.5849

Epoch 3/100

50/50 [=====] - 3s 53ms/step - loss: 0.4337 - val\_loss: 0.5937

Epoch 4/100

50/50 [=====] - 3s 52ms/step - loss: 0.4289 - val\_loss: 0.6808

Epoch 5/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4200 - val\_loss: 0.5625  
Epoch 6/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4166 - val\_loss: 0.5601  
Epoch 7/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4118 - val\_loss: 0.5926  
Epoch 8/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4088 - val\_loss: 0.5567  
Epoch 9/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4069 - val\_loss: 0.5833  
Epoch 10/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3971 - val\_loss: 0.5656  
Epoch 11/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3936 - val\_loss: 0.5326  
Epoch 12/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3907 - val\_loss: 0.5742  
Epoch 13/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3920 - val\_loss: 0.5498  
Epoch 14/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3872 - val\_loss: 0.4892  
Epoch 15/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3805 - val\_loss: 0.4853  
Epoch 16/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3781 - val\_loss: 0.5400  
Epoch 17/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3754 - val\_loss: 0.5174  
Epoch 18/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3708 - val\_loss: 0.5119  
Epoch 19/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3688 - val\_loss: 0.4941  
Epoch 20/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3668 - val\_loss: 0.4459  
Epoch 21/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3649 - val\_loss: 0.4831  
Epoch 22/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3590 - val\_loss: 0.5051  
Epoch 23/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3539 - val\_loss: 0.5076  
Epoch 24/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3500 - val\_loss: 0.5371  
Epoch 25/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3489 - val\_loss: 0.4761  
Epoch 26/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3445 - val\_loss: 0.6199  
Epoch 27/100

50/50 [=====] - 3s 51ms/step - loss: 0.3382 - val\_loss: 0.5277  
Epoch 28/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3364 - val\_loss: 0.5527  
Epoch 29/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3305 - val\_loss: 0.6391  
Epoch 30/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3256 - val\_loss: 0.6385  
Epoch 31/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3200 - val\_loss: 0.6678  
Epoch 32/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3148 - val\_loss: 0.7142  
Epoch 33/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3125 - val\_loss: 0.7624  
Epoch 34/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3068 - val\_loss: 0.7254  
Epoch 35/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3053 - val\_loss: 0.6088  
Epoch 36/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3003 - val\_loss: 0.7874  
Epoch 37/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3018 - val\_loss: 0.7146  
Epoch 38/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2949 - val\_loss: 0.8303  
Epoch 39/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2928 - val\_loss: 0.8466  
Epoch 40/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2890 - val\_loss: 0.7694  
Epoch 41/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2855 - val\_loss: 0.8376  
Epoch 42/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2863 - val\_loss: 0.6858  
Epoch 43/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2821 - val\_loss: 0.5913  
Epoch 44/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2791 - val\_loss: 0.6437  
Epoch 45/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2884 - val\_loss: 0.6029  
Epoch 46/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2837 - val\_loss: 0.6370  
Epoch 47/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2698 - val\_loss: 0.6147  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2724 - val\_loss: 0.6045  
Epoch 49/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2668 - val\_loss: 0.5445

Epoch 50/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2642 - val\_loss: 0.5950  
Epoch 51/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2665 - val\_loss: 0.6054  
Epoch 52/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2586 - val\_loss: 0.6105  
Epoch 53/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2575 - val\_loss: 0.5824  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2553 - val\_loss: 0.6565  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2538 - val\_loss: 0.5605  
Epoch 56/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2498 - val\_loss: 0.6602  
Epoch 57/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2508 - val\_loss: 0.5890  
Epoch 58/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2447 - val\_loss: 0.5984  
Epoch 59/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2452 - val\_loss: 0.6118  
Epoch 60/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2433 - val\_loss: 0.6284  
Epoch 61/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2408 - val\_loss: 0.6734  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2371 - val\_loss: 0.7449  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2336 - val\_loss: 0.6423  
Epoch 64/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2331 - val\_loss: 0.6712  
Epoch 65/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2311 - val\_loss: 0.8098  
Epoch 66/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2276 - val\_loss: 0.6851  
Epoch 67/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2250 - val\_loss: 0.8474  
Epoch 68/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2276 - val\_loss: 0.8644  
Epoch 69/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2238 - val\_loss: 0.8961  
Epoch 70/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2203 - val\_loss: 0.8144  
Epoch 71/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2189 - val\_loss: 0.9337  
Epoch 72/100

50/50 [=====] - 3s 52ms/step - loss: 0.2197 - val\_loss: 0.8530  
Epoch 73/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2184 - val\_loss: 0.7992  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2122 - val\_loss: 0.8924  
Epoch 75/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2136 - val\_loss: 0.8347  
Epoch 76/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2086 - val\_loss: 0.8372  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2080 - val\_loss: 0.8702  
Epoch 78/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2064 - val\_loss: 0.9258  
Epoch 79/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2041 - val\_loss: 0.8991  
Epoch 80/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1992 - val\_loss: 0.8020  
Epoch 81/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2003 - val\_loss: 0.9488  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1977 - val\_loss: 0.8978  
Epoch 83/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1984 - val\_loss: 0.8329  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1937 - val\_loss: 0.9168  
Epoch 85/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1947 - val\_loss: 0.9350  
Epoch 86/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2087 - val\_loss: 0.7770  
Epoch 87/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2067 - val\_loss: 0.9959  
Epoch 88/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1902 - val\_loss: 1.0021  
Epoch 89/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1860 - val\_loss: 0.8293  
Epoch 90/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1853 - val\_loss: 0.9460  
Epoch 91/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1827 - val\_loss: 1.0005  
Epoch 92/100  
50/50 [=====] - 3s 51ms/step - loss: 0.1823 - val\_loss: 0.9661  
Epoch 93/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1776 - val\_loss: 1.0042  
Epoch 94/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1805 - val\_loss: 0.9703

Epoch 95/100

50/50 [=====] - 3s 53ms/step - loss: 0.1763 - val\_loss: 0.9547

Epoch 96/100

50/50 [=====] - 3s 53ms/step - loss: 0.1753 - val\_loss: 1.0291

Epoch 97/100

50/50 [=====] - 3s 52ms/step - loss: 0.1737 - val\_loss: 1.0515

Epoch 98/100

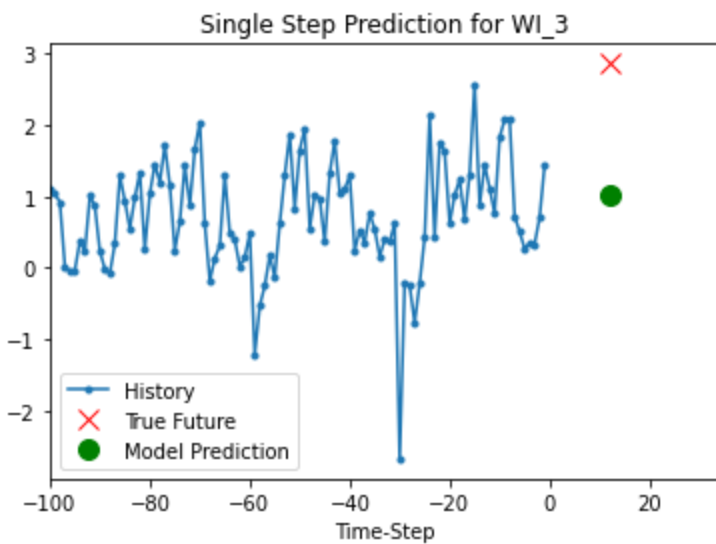
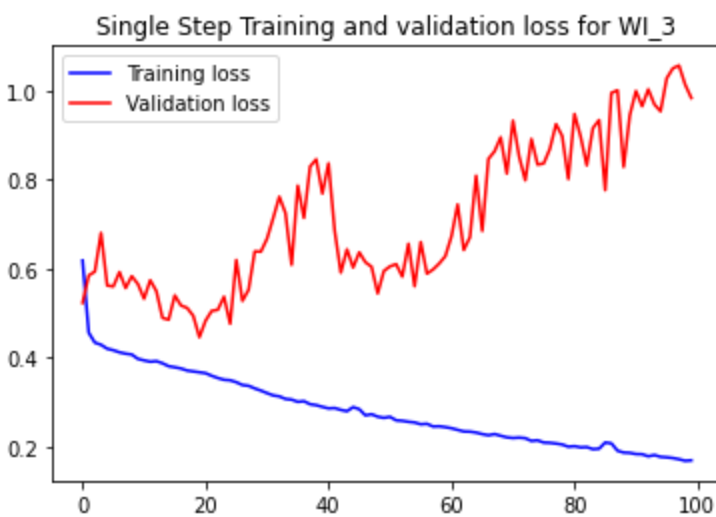
50/50 [=====] - 3s 52ms/step - loss: 0.1710 - val\_loss: 1.0579

Epoch 99/100

50/50 [=====] - 3s 52ms/step - loss: 0.1674 - val\_loss: 1.0150

Epoch 100/100

50/50 [=====] - 3s 52ms/step - loss: 0.1684 - val\_loss: 0.9847



WI\_3 - True Future: 5666

WI\_3 - Model Prediction: 4164

WI\_3 - Model Percentage Error: 26.51%



=====

Training for WI\_2

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 57ms/step - loss: 0.4143 - val\_loss: 0.6441

Epoch 2/100

50/50 [=====] - 3s 51ms/step - loss: 0.3488 - val\_loss: 0.6769

Epoch 3/100

50/50 [=====] - 3s 51ms/step - loss: 0.3349 - val\_loss: 0.6408

Epoch 4/100

50/50 [=====] - 3s 51ms/step - loss: 0.3266 - val\_loss: 0.7728

Epoch 5/100

50/50 [=====] - 3s 51ms/step - loss: 0.3231 - val\_loss: 0.7182

Epoch 6/100

50/50 [=====] - 3s 51ms/step - loss: 0.3190 - val\_loss: 0.6529

Epoch 7/100

50/50 [=====] - 3s 51ms/step - loss: 0.3160 - val\_loss: 0.7218

Epoch 8/100

50/50 [=====] - 3s 51ms/step - loss: 0.3101 - val\_loss: 0.6964

Epoch 9/100

50/50 [=====] - 3s 50ms/step - loss: 0.3078 - val\_loss: 0.7278

Epoch 10/100

50/50 [=====] - 3s 51ms/step - loss: 0.3029 - val\_loss: 0.8012

Epoch 11/100

50/50 [=====] - 3s 51ms/step - loss: 0.3013 - val\_loss: 0.8090

Epoch 12/100

50/50 [=====] - 3s 51ms/step - loss: 0.2945 - val\_loss: 0.8108

Epoch 13/100

50/50 [=====] - 3s 51ms/step - loss: 0.2900 - val\_loss: 0.9058

Epoch 14/100

50/50 [=====] - 3s 51ms/step - loss: 0.2840 - val\_loss: 0.8878

Epoch 15/100

50/50 [=====] - 3s 50ms/step - loss: 0.2848 - val\_loss: 0.8800

Epoch 16/100

50/50 [=====] - 3s 52ms/step - loss: 0.2745 - val\_loss: 0.8093

Epoch 17/100

50/50 [=====] - 3s 51ms/step - loss: 0.2733 - val\_loss: 0.8506

Epoch 18/100

50/50 [=====] - 3s 52ms/step - loss: 0.2703 - val\_loss: 0.7311

Epoch 19/100

50/50 [=====] - 3s 51ms/step - loss: 0.2655 - val\_loss: 0.8002

Epoch 20/100

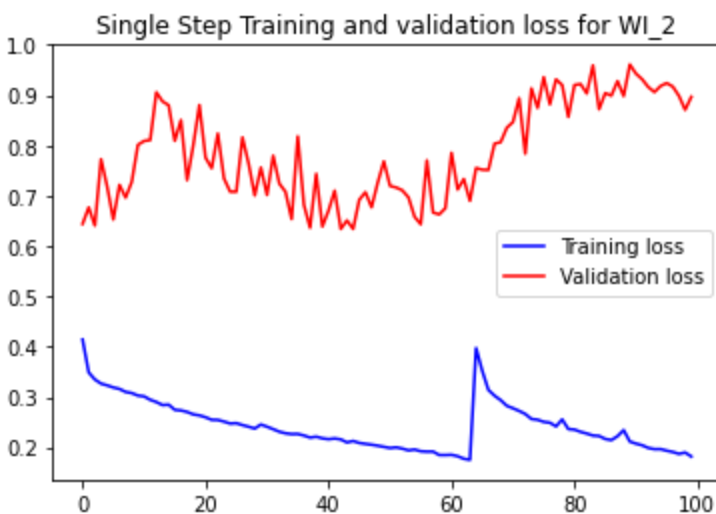
50/50 [=====] - 3s 51ms/step - loss: 0.2634 - val\_loss: 0.8805

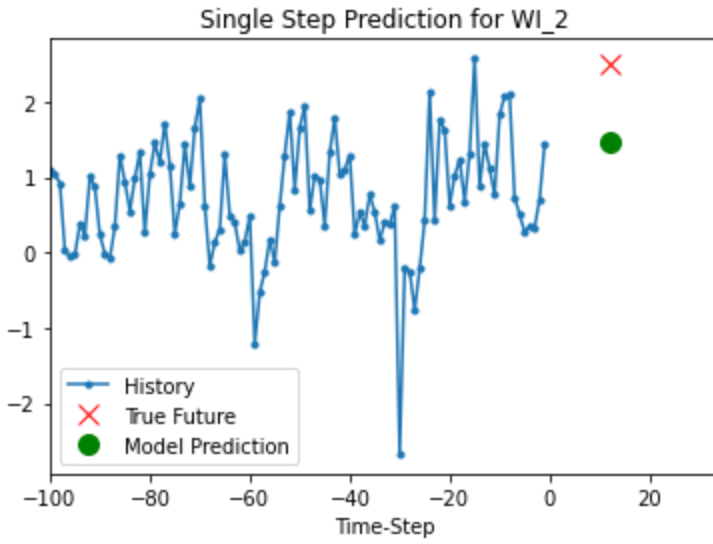
Epoch 21/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2597 - val\_loss: 0.7759  
Epoch 22/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2546 - val\_loss: 0.7549  
Epoch 23/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2544 - val\_loss: 0.8238  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2512 - val\_loss: 0.7345  
Epoch 25/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2472 - val\_loss: 0.7083  
Epoch 26/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2480 - val\_loss: 0.7081  
Epoch 27/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2442 - val\_loss: 0.8161  
Epoch 28/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2410 - val\_loss: 0.7643  
Epoch 29/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2372 - val\_loss: 0.7007  
Epoch 30/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2454 - val\_loss: 0.7562  
Epoch 31/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2409 - val\_loss: 0.7017  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2361 - val\_loss: 0.7797  
Epoch 33/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2310 - val\_loss: 0.7243  
Epoch 34/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2279 - val\_loss: 0.7080  
Epoch 35/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2263 - val\_loss: 0.6537  
Epoch 36/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2265 - val\_loss: 0.8183  
Epoch 37/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2235 - val\_loss: 0.6820  
Epoch 38/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2193 - val\_loss: 0.6364  
Epoch 39/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2211 - val\_loss: 0.7437  
Epoch 40/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2179 - val\_loss: 0.6389  
Epoch 41/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2162 - val\_loss: 0.6706  
Epoch 42/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2176 - val\_loss: 0.7102  
Epoch 43/100

50/50 [=====] - 3s 54ms/step - loss: 0.2157 - val\_loss: 0.6341  
Epoch 44/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2097 - val\_loss: 0.6511  
Epoch 45/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2125 - val\_loss: 0.6341  
Epoch 46/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2087 - val\_loss: 0.6922  
Epoch 47/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2068 - val\_loss: 0.7072  
Epoch 48/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2052 - val\_loss: 0.6772  
Epoch 49/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2032 - val\_loss: 0.7262  
Epoch 50/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2009 - val\_loss: 0.7685  
Epoch 51/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1985 - val\_loss: 0.7197  
Epoch 52/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1999 - val\_loss: 0.7165  
Epoch 53/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1975 - val\_loss: 0.7109  
Epoch 54/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1939 - val\_loss: 0.6970  
Epoch 55/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1955 - val\_loss: 0.6582  
Epoch 56/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1921 - val\_loss: 0.6435  
Epoch 57/100  
50/50 [=====] - 3s 52ms/step - loss: 0.1913 - val\_loss: 0.7705  
Epoch 58/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1915 - val\_loss: 0.6668  
Epoch 59/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1847 - val\_loss: 0.6630  
Epoch 60/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1846 - val\_loss: 0.6753  
Epoch 61/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1851 - val\_loss: 0.7855  
Epoch 62/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1823 - val\_loss: 0.7126  
Epoch 63/100  
50/50 [=====] - 3s 54ms/step - loss: 0.1773 - val\_loss: 0.7335  
Epoch 64/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1751 - val\_loss: 0.6900  
Epoch 65/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3973 - val\_loss: 0.7552

Epoch 66/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3521 - val\_loss: 0.7519  
Epoch 67/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3141 - val\_loss: 0.7514  
Epoch 68/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3026 - val\_loss: 0.8036  
Epoch 69/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2937 - val\_loss: 0.8066  
Epoch 70/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2825 - val\_loss: 0.8354  
Epoch 71/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2776 - val\_loss: 0.8467  
Epoch 72/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2723 - val\_loss: 0.8941  
Epoch 73/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2663 - val\_loss: 0.7837  
Epoch 74/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2563 - val\_loss: 0.9136  
Epoch 75/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2548 - val\_loss: 0.8747  
Epoch 76/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2506 - val\_loss: 0.9360  
Epoch 77/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2489 - val\_loss: 0.8818  
Epoch 78/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2416 - val\_loss: 0.9316  
Epoch 79/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2554 - val\_loss: 0.9202  
Epoch 80/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2363 - val\_loss: 0.8569  
Epoch 81/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2352 - val\_loss: 0.9203  
Epoch 82/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2307 - val\_loss: 0.9222  
Epoch 83/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2274 - val\_loss: 0.9035  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2234 - val\_loss: 0.9593  
Epoch 85/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2225 - val\_loss: 0.8721  
Epoch 86/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2166 - val\_loss: 0.9041  
Epoch 87/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2143 - val\_loss: 0.8991  
Epoch 88/100

50/50 [=====] - 3s 53ms/step - loss: 0.2220 - val\_loss: 0.9281  
Epoch 89/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2342 - val\_loss: 0.8983  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2114 - val\_loss: 0.9611  
Epoch 91/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2073 - val\_loss: 0.9428  
Epoch 92/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2041 - val\_loss: 0.9317  
Epoch 93/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1988 - val\_loss: 0.9163  
Epoch 94/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1963 - val\_loss: 0.9063  
Epoch 95/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1964 - val\_loss: 0.9182  
Epoch 96/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1933 - val\_loss: 0.9241  
Epoch 97/100  
50/50 [=====] - 3s 53ms/step - loss: 0.1907 - val\_loss: 0.9170  
Epoch 98/100  
50/50 [=====] - 3s 67ms/step - loss: 0.1869 - val\_loss: 0.8985  
Epoch 99/100  
50/50 [=====] - 4s 89ms/step - loss: 0.1897 - val\_loss: 0.8710  
Epoch 100/100  
50/50 [=====] - 3s 59ms/step - loss: 0.1817 - val\_loss: 0.8968





WI\_2 - True Future: 6348

WI\_2 - Model Prediction: 5070

WI\_2 - Model Percentage Error: 20.13%

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