

Training for CA\_3

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 66ms/step - loss: 0.5582 - val\_loss: 0.5791

Epoch 2/100

50/50 [=====] - 3s 60ms/step - loss: 0.4899 - val\_loss: 0.5271

Epoch 3/100

50/50 [=====] - 3s 60ms/step - loss: 0.4521 - val\_loss: 0.4384

Epoch 4/100

50/50 [=====] - 3s 60ms/step - loss: 0.4254 - val\_loss: 0.3810

Epoch 5/100

50/50 [=====] - 3s 55ms/step - loss: 0.3994 - val\_loss: 0.3852

Epoch 6/100

50/50 [=====] - 3s 56ms/step - loss: 0.3827 - val\_loss: 0.3943

Epoch 7/100

50/50 [=====] - 3s 57ms/step - loss: 0.3691 - val\_loss: 0.4063

Epoch 8/100

50/50 [=====] - 3s 55ms/step - loss: 0.3653 - val\_loss: 0.4265

Epoch 9/100

50/50 [=====] - 3s 56ms/step - loss: 0.3611 - val\_loss: 0.4192

Epoch 10/100

50/50 [=====] - 3s 54ms/step - loss: 0.3598 - val\_loss: 0.4201

Epoch 11/100

50/50 [=====] - 3s 56ms/step - loss: 0.3529 - val\_loss: 0.4188

Epoch 12/100

50/50 [=====] - 3s 54ms/step - loss: 0.3571 - val\_loss: 0.4131

Epoch 13/100

50/50 [=====] - 3s 54ms/step - loss: 0.3520 - val\_loss: 0.4160

Epoch 14/100

50/50 [=====] - 3s 53ms/step - loss: 0.3520 - val\_loss: 0.4212

Epoch 15/100

50/50 [=====] - 3s 54ms/step - loss: 0.3491 - val\_loss: 0.4161

Epoch 16/100

50/50 [=====] - 3s 54ms/step - loss: 0.3497 - val\_loss: 0.4255

Epoch 17/100

50/50 [=====] - 3s 54ms/step - loss: 0.3433 - val\_loss: 0.4281

Epoch 18/100

50/50 [=====] - 3s 54ms/step - loss: 0.3458 - val\_loss: 0.4292

Epoch 19/100

50/50 [=====] - 3s 53ms/step - loss: 0.3435 - val\_loss: 0.4343

Epoch 20/100

50/50 [=====] - 3s 54ms/step - loss: 0.3423 - val\_loss: 0.4342

Epoch 21/100

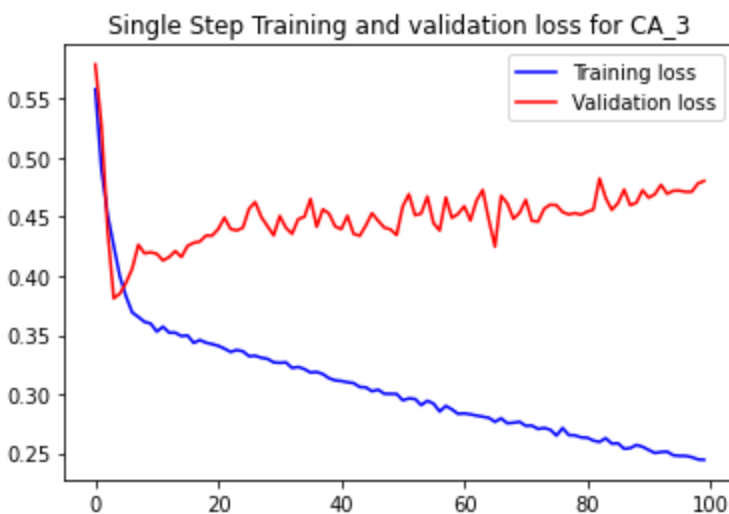
50/50 [=====] - 3s 53ms/step - loss: 0.3409 - val\_loss: 0.4398

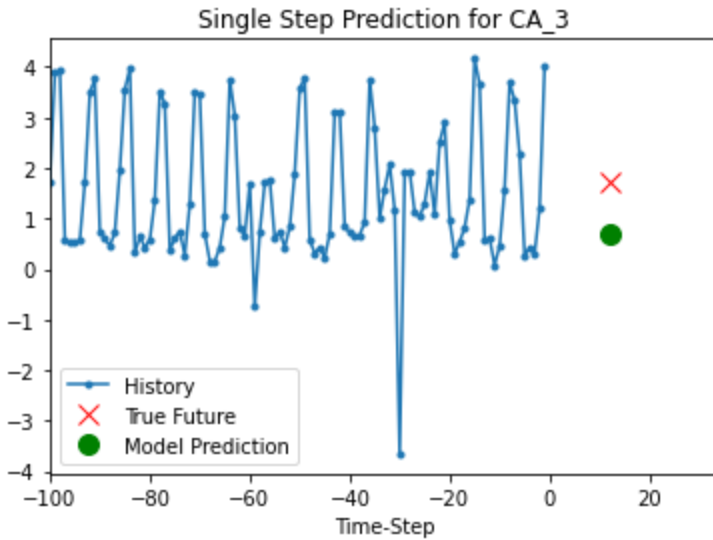
Epoch 22/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3385 - val\_loss: 0.4495  
Epoch 23/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3357 - val\_loss: 0.4398  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3373 - val\_loss: 0.4386  
Epoch 25/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3362 - val\_loss: 0.4408  
Epoch 26/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3321 - val\_loss: 0.4569  
Epoch 27/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3324 - val\_loss: 0.4626  
Epoch 28/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3308 - val\_loss: 0.4499  
Epoch 29/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3298 - val\_loss: 0.4422  
Epoch 30/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3269 - val\_loss: 0.4344  
Epoch 31/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3265 - val\_loss: 0.4508  
Epoch 32/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3269 - val\_loss: 0.4408  
Epoch 33/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3221 - val\_loss: 0.4357  
Epoch 34/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3230 - val\_loss: 0.4482  
Epoch 35/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3212 - val\_loss: 0.4501  
Epoch 36/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3183 - val\_loss: 0.4653  
Epoch 37/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3188 - val\_loss: 0.4417  
Epoch 38/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3170 - val\_loss: 0.4564  
Epoch 39/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3135 - val\_loss: 0.4529  
Epoch 40/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3116 - val\_loss: 0.4420  
Epoch 41/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3111 - val\_loss: 0.4396  
Epoch 42/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3100 - val\_loss: 0.4510  
Epoch 43/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3093 - val\_loss: 0.4357  
Epoch 44/100

50/50 [=====] - 3s 57ms/step - loss: 0.3060 - val\_loss: 0.4341  
Epoch 45/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3057 - val\_loss: 0.4428  
Epoch 46/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3024 - val\_loss: 0.4532  
Epoch 47/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3037 - val\_loss: 0.4468  
Epoch 48/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3003 - val\_loss: 0.4410  
Epoch 49/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3002 - val\_loss: 0.4394  
Epoch 50/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3001 - val\_loss: 0.4347  
Epoch 51/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2948 - val\_loss: 0.4590  
Epoch 52/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2964 - val\_loss: 0.4693  
Epoch 53/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2959 - val\_loss: 0.4515  
Epoch 54/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2906 - val\_loss: 0.4529  
Epoch 55/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2944 - val\_loss: 0.4673  
Epoch 56/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2920 - val\_loss: 0.4448  
Epoch 57/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2853 - val\_loss: 0.4386  
Epoch 58/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2900 - val\_loss: 0.4665  
Epoch 59/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2870 - val\_loss: 0.4492  
Epoch 60/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2833 - val\_loss: 0.4526  
Epoch 61/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2837 - val\_loss: 0.4592  
Epoch 62/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2829 - val\_loss: 0.4470  
Epoch 63/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2818 - val\_loss: 0.4639  
Epoch 64/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2809 - val\_loss: 0.4729  
Epoch 65/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2799 - val\_loss: 0.4475  
Epoch 66/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2765 - val\_loss: 0.4249

Epoch 67/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2795 - val\_loss: 0.4679  
Epoch 68/100  
50/50 [=====] - 4s 73ms/step - loss: 0.2753 - val\_loss: 0.4615  
Epoch 69/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2758 - val\_loss: 0.4485  
Epoch 70/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2765 - val\_loss: 0.4535  
Epoch 71/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2732 - val\_loss: 0.4646  
Epoch 72/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2734 - val\_loss: 0.4467  
Epoch 73/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2705 - val\_loss: 0.4460  
Epoch 74/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2713 - val\_loss: 0.4570  
Epoch 75/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2698 - val\_loss: 0.4604  
Epoch 76/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2648 - val\_loss: 0.4599  
Epoch 77/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2713 - val\_loss: 0.4541  
Epoch 78/100  
50/50 [=====] - 3s 63ms/step - loss: 0.2653 - val\_loss: 0.4521  
Epoch 79/100  
50/50 [=====] - 3s 64ms/step - loss: 0.2651 - val\_loss: 0.4533  
Epoch 80/100  
50/50 [=====] - 3s 63ms/step - loss: 0.2633 - val\_loss: 0.4519  
Epoch 81/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2631 - val\_loss: 0.4545  
Epoch 82/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2606 - val\_loss: 0.4562  
Epoch 83/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2595 - val\_loss: 0.4826  
Epoch 84/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2627 - val\_loss: 0.4662  
Epoch 85/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2581 - val\_loss: 0.4559  
Epoch 86/100  
50/50 [=====] - 3s 65ms/step - loss: 0.2584 - val\_loss: 0.4617  
Epoch 87/100  
50/50 [=====] - 3s 64ms/step - loss: 0.2537 - val\_loss: 0.4732  
Epoch 88/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2543 - val\_loss: 0.4599  
Epoch 89/100

50/50 [=====] - 3s 64ms/step - loss: 0.2569 - val\_loss: 0.4621  
Epoch 90/100  
50/50 [=====] - 3s 63ms/step - loss: 0.2554 - val\_loss: 0.4727  
Epoch 91/100  
50/50 [=====] - 3s 65ms/step - loss: 0.2527 - val\_loss: 0.4663  
Epoch 92/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2501 - val\_loss: 0.4693  
Epoch 93/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2510 - val\_loss: 0.4773  
Epoch 94/100  
50/50 [=====] - 3s 64ms/step - loss: 0.2513 - val\_loss: 0.4696  
Epoch 95/100  
50/50 [=====] - 3s 65ms/step - loss: 0.2482 - val\_loss: 0.4722  
Epoch 96/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2477 - val\_loss: 0.4723  
Epoch 97/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2477 - val\_loss: 0.4713  
Epoch 98/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2466 - val\_loss: 0.4713  
Epoch 99/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2447 - val\_loss: 0.4783  
Epoch 100/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2443 - val\_loss: 0.4805





CA\_3 - True Future: 7921

CA\_3 - Model Prediction: 6669

CA\_3 - Model Percentage Error: 15.81%

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Training for CA\_4

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 67ms/step - loss: 0.5353 - val\_loss: 0.4935

Epoch 2/100

50/50 [=====] - 3s 59ms/step - loss: 0.4343 - val\_loss: 0.4305

Epoch 3/100

50/50 [=====] - 3s 59ms/step - loss: 0.3982 - val\_loss: 0.4082

Epoch 4/100

50/50 [=====] - 3s 60ms/step - loss: 0.3847 - val\_loss: 0.3926

Epoch 5/100

50/50 [=====] - 3s 63ms/step - loss: 0.3730 - val\_loss: 0.3825

Epoch 6/100

50/50 [=====] - 3s 62ms/step - loss: 0.3716 - val\_loss: 0.3864

Epoch 7/100

50/50 [=====] - 3s 60ms/step - loss: 0.3641 - val\_loss: 0.3810

Epoch 8/100

50/50 [=====] - 3s 58ms/step - loss: 0.3622 - val\_loss: 0.3861

Epoch 9/100

50/50 [=====] - 3s 60ms/step - loss: 0.3598 - val\_loss: 0.3933

Epoch 10/100

50/50 [=====] - 3s 59ms/step - loss: 0.3560 - val\_loss: 0.3740

Epoch 11/100

50/50 [=====] - 3s 62ms/step - loss: 0.3563 - val\_loss: 0.3750

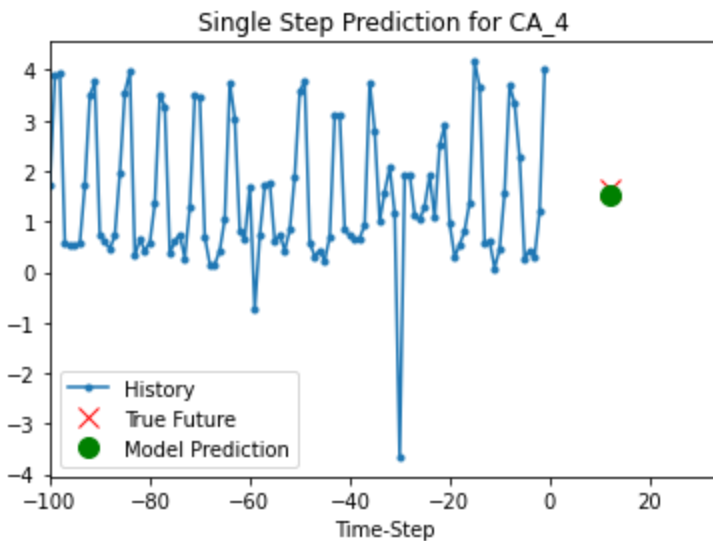
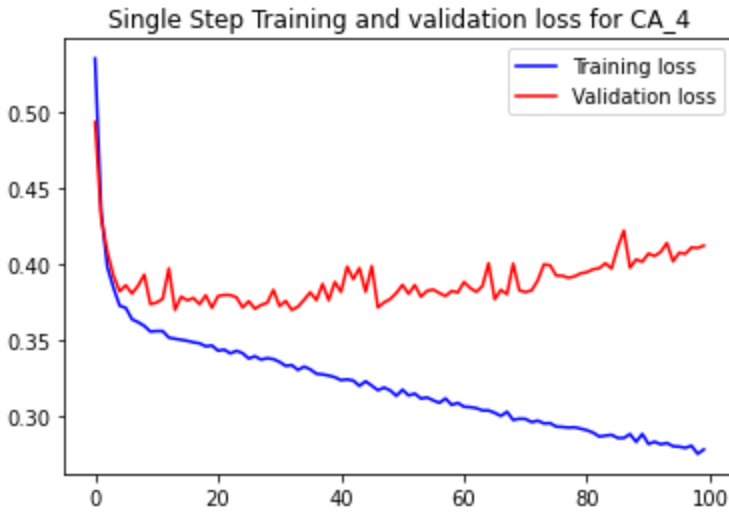
Epoch 12/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3563 - val\_loss: 0.3775  
Epoch 13/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3521 - val\_loss: 0.3975  
Epoch 14/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3513 - val\_loss: 0.3702  
Epoch 15/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3506 - val\_loss: 0.3790  
Epoch 16/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3499 - val\_loss: 0.3765  
Epoch 17/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3489 - val\_loss: 0.3780  
Epoch 18/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3483 - val\_loss: 0.3740  
Epoch 19/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3463 - val\_loss: 0.3798  
Epoch 20/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3469 - val\_loss: 0.3716  
Epoch 21/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3434 - val\_loss: 0.3793  
Epoch 22/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3441 - val\_loss: 0.3800  
Epoch 23/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3417 - val\_loss: 0.3800  
Epoch 24/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3434 - val\_loss: 0.3785  
Epoch 25/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3418 - val\_loss: 0.3719  
Epoch 26/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3383 - val\_loss: 0.3759  
Epoch 27/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3398 - val\_loss: 0.3710  
Epoch 28/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3376 - val\_loss: 0.3735  
Epoch 29/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3385 - val\_loss: 0.3748  
Epoch 30/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3379 - val\_loss: 0.3834  
Epoch 31/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3361 - val\_loss: 0.3727  
Epoch 32/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3335 - val\_loss: 0.3761  
Epoch 33/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3340 - val\_loss: 0.3702  
Epoch 34/100

50/50 [=====] - 3s 58ms/step - loss: 0.3308 - val\_loss: 0.3724  
Epoch 35/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3330 - val\_loss: 0.3768  
Epoch 36/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3312 - val\_loss: 0.3818  
Epoch 37/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3283 - val\_loss: 0.3766  
Epoch 38/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3279 - val\_loss: 0.3872  
Epoch 39/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3271 - val\_loss: 0.3766  
Epoch 40/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3261 - val\_loss: 0.3886  
Epoch 41/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3241 - val\_loss: 0.3820  
Epoch 42/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3246 - val\_loss: 0.3986  
Epoch 43/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3238 - val\_loss: 0.3904  
Epoch 44/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3204 - val\_loss: 0.3977  
Epoch 45/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3234 - val\_loss: 0.3821  
Epoch 46/100  
50/50 [=====] - 3s 65ms/step - loss: 0.3205 - val\_loss: 0.3990  
Epoch 47/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3175 - val\_loss: 0.3718  
Epoch 48/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3193 - val\_loss: 0.3752  
Epoch 49/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3174 - val\_loss: 0.3773  
Epoch 50/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3138 - val\_loss: 0.3813  
Epoch 51/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3178 - val\_loss: 0.3867  
Epoch 52/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3141 - val\_loss: 0.3808  
Epoch 53/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3153 - val\_loss: 0.3866  
Epoch 54/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3120 - val\_loss: 0.3789  
Epoch 55/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3127 - val\_loss: 0.3828  
Epoch 56/100  
50/50 [=====] - 3s 64ms/step - loss: 0.3109 - val\_loss: 0.3836



Epoch 57/100  
50/50 [=====] - 3s 65ms/step - loss: 0.3092 - val\_loss: 0.3813  
Epoch 58/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3121 - val\_loss: 0.3793  
Epoch 59/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3079 - val\_loss: 0.3827  
Epoch 60/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3092 - val\_loss: 0.3816  
Epoch 61/100  
50/50 [=====] - 3s 65ms/step - loss: 0.3067 - val\_loss: 0.3885  
Epoch 62/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3064 - val\_loss: 0.3846  
Epoch 63/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3058 - val\_loss: 0.3821  
Epoch 64/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3043 - val\_loss: 0.3859  
Epoch 65/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3042 - val\_loss: 0.4009  
Epoch 66/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3027 - val\_loss: 0.3772  
Epoch 67/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3006 - val\_loss: 0.3834  
Epoch 68/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3033 - val\_loss: 0.3806  
Epoch 69/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2980 - val\_loss: 0.4006  
Epoch 70/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2988 - val\_loss: 0.3831  
Epoch 71/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2987 - val\_loss: 0.3819  
Epoch 72/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2966 - val\_loss: 0.3830  
Epoch 73/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2975 - val\_loss: 0.3896  
Epoch 74/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2957 - val\_loss: 0.4001  
Epoch 75/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2959 - val\_loss: 0.3995  
Epoch 76/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2936 - val\_loss: 0.3927  
Epoch 77/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2934 - val\_loss: 0.3926  
Epoch 78/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2930 - val\_loss: 0.3913  
Epoch 79/100

50/50 [=====] - 3s 57ms/step - loss: 0.2932 - val\_loss: 0.3923  
Epoch 80/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2922 - val\_loss: 0.3942  
Epoch 81/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2912 - val\_loss: 0.3950  
Epoch 82/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2897 - val\_loss: 0.3969  
Epoch 83/100  
50/50 [=====] - 4s 88ms/step - loss: 0.2871 - val\_loss: 0.3976  
Epoch 84/100  
50/50 [=====] - 4s 72ms/step - loss: 0.2877 - val\_loss: 0.4008  
Epoch 85/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2882 - val\_loss: 0.3974  
Epoch 86/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2862 - val\_loss: 0.4112  
Epoch 87/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2861 - val\_loss: 0.4223  
Epoch 88/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2887 - val\_loss: 0.3979  
Epoch 89/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2836 - val\_loss: 0.4033  
Epoch 90/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2888 - val\_loss: 0.4019  
Epoch 91/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2822 - val\_loss: 0.4072  
Epoch 92/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2837 - val\_loss: 0.4056  
Epoch 93/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2820 - val\_loss: 0.4083  
Epoch 94/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2829 - val\_loss: 0.4141  
Epoch 95/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2807 - val\_loss: 0.4021  
Epoch 96/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2805 - val\_loss: 0.4078  
Epoch 97/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2797 - val\_loss: 0.4070  
Epoch 98/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2810 - val\_loss: 0.4112  
Epoch 99/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2758 - val\_loss: 0.4109  
Epoch 100/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2786 - val\_loss: 0.4124



CA\_4 - True Future: 2799

CA\_4 - Model Prediction: 2742

CA\_4 - Model Percentage Error: 2.04%

=====

Training for CA\_1

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 70ms/step - loss: 0.6366 - val\_loss: 0.6195

Epoch 2/100

50/50 [=====] - 3s 62ms/step - loss: 0.5213 - val\_loss: 0.5156

Epoch 3/100

50/50 [=====] - 3s 67ms/step - loss: 0.4386 - val\_loss: 0.4669

Epoch 4/100

50/50 [=====] - 3s 67ms/step - loss: 0.3962 - val\_loss: 0.4395

Epoch 5/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3779 - val\_loss: 0.4410  
Epoch 6/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3628 - val\_loss: 0.4432  
Epoch 7/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3563 - val\_loss: 0.4475  
Epoch 8/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3471 - val\_loss: 0.4482  
Epoch 9/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3469 - val\_loss: 0.4464  
Epoch 10/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3404 - val\_loss: 0.4450  
Epoch 11/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3405 - val\_loss: 0.4407  
Epoch 12/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3386 - val\_loss: 0.4418  
Epoch 13/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3353 - val\_loss: 0.4410  
Epoch 14/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3346 - val\_loss: 0.4321  
Epoch 15/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3342 - val\_loss: 0.4329  
Epoch 16/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3315 - val\_loss: 0.4307  
Epoch 17/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3295 - val\_loss: 0.4438  
Epoch 18/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3316 - val\_loss: 0.4262  
Epoch 19/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3286 - val\_loss: 0.4205  
Epoch 20/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3272 - val\_loss: 0.4219  
Epoch 21/100  
50/50 [=====] - 3s 63ms/step - loss: 0.3239 - val\_loss: 0.4189  
Epoch 22/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3267 - val\_loss: 0.4209  
Epoch 23/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3220 - val\_loss: 0.4202  
Epoch 24/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3254 - val\_loss: 0.4169  
Epoch 25/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3224 - val\_loss: 0.4137  
Epoch 26/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3219 - val\_loss: 0.4134  
Epoch 27/100

50/50 [=====] - 3s 60ms/step - loss: 0.3197 - val\_loss: 0.4125  
Epoch 28/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3220 - val\_loss: 0.4135  
Epoch 29/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3165 - val\_loss: 0.4102  
Epoch 30/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3212 - val\_loss: 0.4129  
Epoch 31/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3136 - val\_loss: 0.4136  
Epoch 32/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3170 - val\_loss: 0.4140  
Epoch 33/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3166 - val\_loss: 0.4170  
Epoch 34/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3138 - val\_loss: 0.4152  
Epoch 35/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3145 - val\_loss: 0.4244  
Epoch 36/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3112 - val\_loss: 0.4219  
Epoch 37/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3160 - val\_loss: 0.4187  
Epoch 38/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3102 - val\_loss: 0.4171  
Epoch 39/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3109 - val\_loss: 0.4212  
Epoch 40/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3089 - val\_loss: 0.4145  
Epoch 41/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3097 - val\_loss: 0.4157  
Epoch 42/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3063 - val\_loss: 0.4197  
Epoch 43/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3085 - val\_loss: 0.4294  
Epoch 44/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3063 - val\_loss: 0.4237  
Epoch 45/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3050 - val\_loss: 0.4325  
Epoch 46/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3047 - val\_loss: 0.4426  
Epoch 47/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3041 - val\_loss: 0.4227  
Epoch 48/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3036 - val\_loss: 0.4270  
Epoch 49/100  
50/50 [=====] - 3s 62ms/step - loss: 0.3031 - val\_loss: 0.4380

Epoch 50/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3008 - val\_loss: 0.4350  
Epoch 51/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3023 - val\_loss: 0.4326  
Epoch 52/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2987 - val\_loss: 0.4369  
Epoch 53/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2980 - val\_loss: 0.4391  
Epoch 54/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2979 - val\_loss: 0.4462  
Epoch 55/100  
50/50 [=====] - 3s 64ms/step - loss: 0.2965 - val\_loss: 0.4464  
Epoch 56/100  
50/50 [=====] - 3s 65ms/step - loss: 0.2980 - val\_loss: 0.4542  
Epoch 57/100  
50/50 [=====] - 3s 64ms/step - loss: 0.2930 - val\_loss: 0.4548  
Epoch 58/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2951 - val\_loss: 0.4588  
Epoch 59/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2918 - val\_loss: 0.4649  
Epoch 60/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2930 - val\_loss: 0.4666  
Epoch 61/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2943 - val\_loss: 0.4654  
Epoch 62/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2890 - val\_loss: 0.4706  
Epoch 63/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2902 - val\_loss: 0.4744  
Epoch 64/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2883 - val\_loss: 0.4786  
Epoch 65/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2887 - val\_loss: 0.4852  
Epoch 66/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2879 - val\_loss: 0.4878  
Epoch 67/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2862 - val\_loss: 0.4827  
Epoch 68/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2855 - val\_loss: 0.4812  
Epoch 69/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2852 - val\_loss: 0.4947  
Epoch 70/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2831 - val\_loss: 0.4979  
Epoch 71/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2820 - val\_loss: 0.4963  
Epoch 72/100

50/50 [=====] - 3s 61ms/step - loss: 0.2835 - val\_loss: 0.4975  
Epoch 73/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2804 - val\_loss: 0.5006  
Epoch 74/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2820 - val\_loss: 0.5164  
Epoch 75/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2797 - val\_loss: 0.5060  
Epoch 76/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2812 - val\_loss: 0.5044  
Epoch 77/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2786 - val\_loss: 0.4996  
Epoch 78/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2776 - val\_loss: 0.5182  
Epoch 79/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2768 - val\_loss: 0.5067  
Epoch 80/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2741 - val\_loss: 0.5067  
Epoch 81/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2768 - val\_loss: 0.5037  
Epoch 82/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2743 - val\_loss: 0.5064  
Epoch 83/100  
50/50 [=====] - 3s 62ms/step - loss: 0.2736 - val\_loss: 0.5093  
Epoch 84/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2724 - val\_loss: 0.5131  
Epoch 85/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2730 - val\_loss: 0.5124  
Epoch 86/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2714 - val\_loss: 0.5232  
Epoch 87/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2711 - val\_loss: 0.5177  
Epoch 88/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2697 - val\_loss: 0.5323  
Epoch 89/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2684 - val\_loss: 0.5209  
Epoch 90/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2674 - val\_loss: 0.5363  
Epoch 91/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2665 - val\_loss: 0.5265  
Epoch 92/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2657 - val\_loss: 0.5285  
Epoch 93/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2658 - val\_loss: 0.5405  
Epoch 94/100  
50/50 [=====] - 3s 61ms/step - loss: 0.2631 - val\_loss: 0.5599

Epoch 95/100

50/50 [=====] - 3s 60ms/step - loss: 0.2630 - val\_loss: 0.5458

Epoch 96/100

50/50 [=====] - 3s 60ms/step - loss: 0.2639 - val\_loss: 0.5378

Epoch 97/100

50/50 [=====] - 3s 60ms/step - loss: 0.2615 - val\_loss: 0.5545

Epoch 98/100

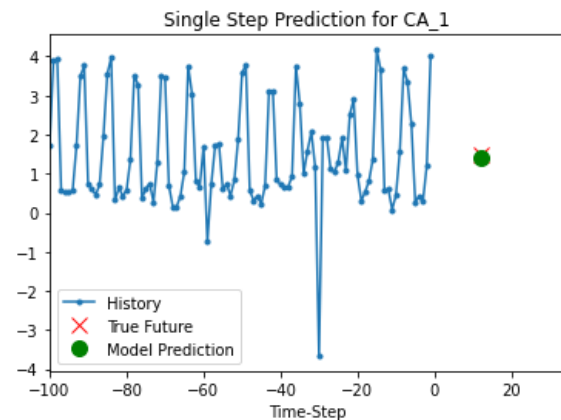
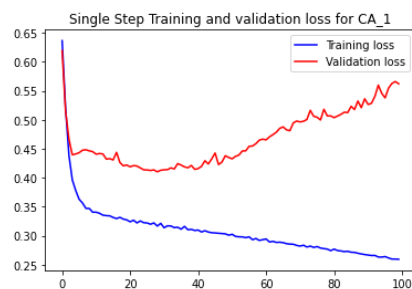
50/50 [=====] - 3s 59ms/step - loss: 0.2596 - val\_loss: 0.5627

Epoch 99/100

50/50 [=====] - 3s 59ms/step - loss: 0.2596 - val\_loss: 0.5660

Epoch 100/100

50/50 [=====] - 3s 60ms/step - loss: 0.2592 - val\_loss: 0.5622



CA\_1 - True Future: 5483

CA\_1 - Model Prediction: 5393

CA\_1 - Model Percentage Error: 1.64%

=====  
=====

Training for CA\_2

Single window of past history : (100, 4)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 68ms/step - loss: 0.6594 - val\_loss: 1.0440

Epoch 2/100

50/50 [=====] - 3s 60ms/step - loss: 0.4966 - val\_loss: 0.8521



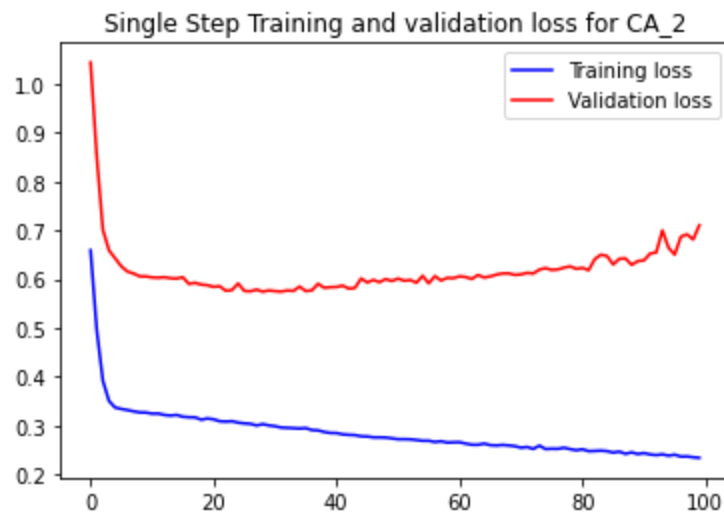
Epoch 3/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3922 - val\_loss: 0.7015  
Epoch 4/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3507 - val\_loss: 0.6592  
Epoch 5/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3373 - val\_loss: 0.6428  
Epoch 6/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3344 - val\_loss: 0.6266  
Epoch 7/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3322 - val\_loss: 0.6159  
Epoch 8/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3295 - val\_loss: 0.6118  
Epoch 9/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3274 - val\_loss: 0.6060  
Epoch 10/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3271 - val\_loss: 0.6059  
Epoch 11/100  
50/50 [=====] - 3s 60ms/step - loss: 0.3248 - val\_loss: 0.6038  
Epoch 12/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3250 - val\_loss: 0.6031  
Epoch 13/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3221 - val\_loss: 0.6043  
Epoch 14/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3208 - val\_loss: 0.6021  
Epoch 15/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3221 - val\_loss: 0.6014  
Epoch 16/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3185 - val\_loss: 0.6043  
Epoch 17/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3174 - val\_loss: 0.5904  
Epoch 18/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3172 - val\_loss: 0.5928  
Epoch 19/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3124 - val\_loss: 0.5891  
Epoch 20/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3149 - val\_loss: 0.5879  
Epoch 21/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3132 - val\_loss: 0.5844  
Epoch 22/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3092 - val\_loss: 0.5858  
Epoch 23/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3085 - val\_loss: 0.5764  
Epoch 24/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3093 - val\_loss: 0.5779  
Epoch 25/100

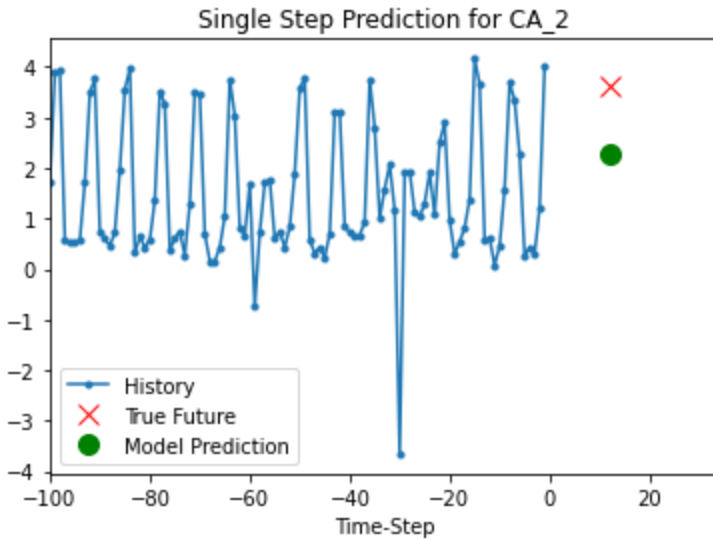
50/50 [=====] - 3s 57ms/step - loss: 0.3064 - val\_loss: 0.5913  
Epoch 26/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3049 - val\_loss: 0.5762  
Epoch 27/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3039 - val\_loss: 0.5754  
Epoch 28/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3006 - val\_loss: 0.5788  
Epoch 29/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3034 - val\_loss: 0.5747  
Epoch 30/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3007 - val\_loss: 0.5771  
Epoch 31/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2991 - val\_loss: 0.5757  
Epoch 32/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2963 - val\_loss: 0.5748  
Epoch 33/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2957 - val\_loss: 0.5771  
Epoch 34/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2951 - val\_loss: 0.5762  
Epoch 35/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2943 - val\_loss: 0.5851  
Epoch 36/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2952 - val\_loss: 0.5758  
Epoch 37/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2912 - val\_loss: 0.5773  
Epoch 38/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2906 - val\_loss: 0.5907  
Epoch 39/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2873 - val\_loss: 0.5826  
Epoch 40/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2852 - val\_loss: 0.5838  
Epoch 41/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2850 - val\_loss: 0.5842  
Epoch 42/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2824 - val\_loss: 0.5869  
Epoch 43/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2814 - val\_loss: 0.5809  
Epoch 44/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2808 - val\_loss: 0.5823  
Epoch 45/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2785 - val\_loss: 0.6016  
Epoch 46/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2780 - val\_loss: 0.5935  
Epoch 47/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2762 - val\_loss: 0.5986

Epoch 48/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2761 - val\_loss: 0.5941  
Epoch 49/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2758 - val\_loss: 0.6004  
Epoch 50/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2742 - val\_loss: 0.5964  
Epoch 51/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2725 - val\_loss: 0.6014  
Epoch 52/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2725 - val\_loss: 0.5971  
Epoch 53/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2721 - val\_loss: 0.5985  
Epoch 54/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2709 - val\_loss: 0.5930  
Epoch 55/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2692 - val\_loss: 0.6070  
Epoch 56/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2693 - val\_loss: 0.5918  
Epoch 57/100  
50/50 [=====] - 3s 60ms/step - loss: 0.2668 - val\_loss: 0.6064  
Epoch 58/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2682 - val\_loss: 0.5975  
Epoch 59/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2656 - val\_loss: 0.6028  
Epoch 60/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2660 - val\_loss: 0.6023  
Epoch 61/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2664 - val\_loss: 0.6060  
Epoch 62/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2635 - val\_loss: 0.6047  
Epoch 63/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2611 - val\_loss: 0.6005  
Epoch 64/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2610 - val\_loss: 0.6088  
Epoch 65/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2635 - val\_loss: 0.6036  
Epoch 66/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2603 - val\_loss: 0.6059  
Epoch 67/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2596 - val\_loss: 0.6095  
Epoch 68/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2607 - val\_loss: 0.6119  
Epoch 69/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2597 - val\_loss: 0.6121  
Epoch 70/100

50/50 [=====] - 3s 58ms/step - loss: 0.2582 - val\_loss: 0.6089  
Epoch 71/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2550 - val\_loss: 0.6100  
Epoch 72/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2565 - val\_loss: 0.6132  
Epoch 73/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2526 - val\_loss: 0.6118  
Epoch 74/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2593 - val\_loss: 0.6198  
Epoch 75/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2523 - val\_loss: 0.6228  
Epoch 76/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2530 - val\_loss: 0.6192  
Epoch 77/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2527 - val\_loss: 0.6202  
Epoch 78/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2549 - val\_loss: 0.6238  
Epoch 79/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2521 - val\_loss: 0.6263  
Epoch 80/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2499 - val\_loss: 0.6214  
Epoch 81/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2518 - val\_loss: 0.6233  
Epoch 82/100  
50/50 [=====] - 4s 82ms/step - loss: 0.2480 - val\_loss: 0.6186  
Epoch 83/100  
50/50 [=====] - 4s 82ms/step - loss: 0.2484 - val\_loss: 0.6412  
Epoch 84/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2491 - val\_loss: 0.6503  
Epoch 85/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2480 - val\_loss: 0.6475  
Epoch 86/100  
50/50 [=====] - 3s 58ms/step - loss: 0.2451 - val\_loss: 0.6303  
Epoch 87/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2471 - val\_loss: 0.6419  
Epoch 88/100  
50/50 [=====] - 3s 59ms/step - loss: 0.2425 - val\_loss: 0.6427  
Epoch 89/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2455 - val\_loss: 0.6295  
Epoch 90/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2421 - val\_loss: 0.6372  
Epoch 91/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2440 - val\_loss: 0.6388  
Epoch 92/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2413 - val\_loss: 0.6526

Epoch 93/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2399 - val\_loss: 0.6550  
Epoch 94/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2415 - val\_loss: 0.7002  
Epoch 95/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2387 - val\_loss: 0.6645  
Epoch 96/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2408 - val\_loss: 0.6505  
Epoch 97/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2368 - val\_loss: 0.6871  
Epoch 98/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2372 - val\_loss: 0.6921  
Epoch 99/100  
50/50 [=====] - 3s 57ms/step - loss: 0.2354 - val\_loss: 0.6815  
Epoch 100/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2343 - val\_loss: 0.7105





CA\_2 - True Future: 5645

CA\_2 - Model Prediction: 4600

CA\_2 - Model Percentage Error: 18.51%

=====

Training for TX\_1

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 66ms/step - loss: 0.6523 - val\_loss: 0.6023

Epoch 2/100

50/50 [=====] - 3s 58ms/step - loss: 0.5934 - val\_loss: 0.5476

Epoch 3/100

50/50 [=====] - 3s 57ms/step - loss: 0.5472 - val\_loss: 0.5233

Epoch 4/100

50/50 [=====] - 3s 57ms/step - loss: 0.5035 - val\_loss: 0.4754

Epoch 5/100

50/50 [=====] - 3s 55ms/step - loss: 0.4761 - val\_loss: 0.4370

Epoch 6/100

50/50 [=====] - 3s 55ms/step - loss: 0.4583 - val\_loss: 0.4731

Epoch 7/100

50/50 [=====] - 3s 56ms/step - loss: 0.4494 - val\_loss: 0.4354

Epoch 8/100

50/50 [=====] - 3s 55ms/step - loss: 0.4400 - val\_loss: 0.4395

Epoch 9/100

50/50 [=====] - 3s 54ms/step - loss: 0.4368 - val\_loss: 0.4325

Epoch 10/100

50/50 [=====] - 3s 55ms/step - loss: 0.4288 - val\_loss: 0.4150

Epoch 11/100

50/50 [=====] - 3s 55ms/step - loss: 0.4289 - val\_loss: 0.4244

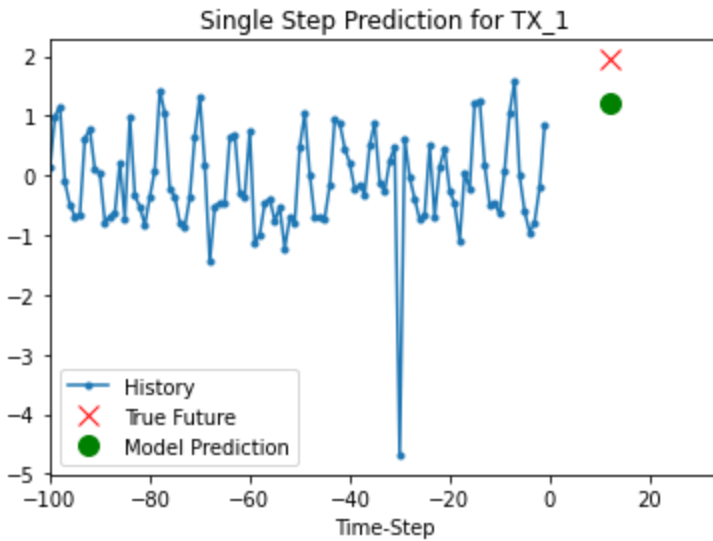
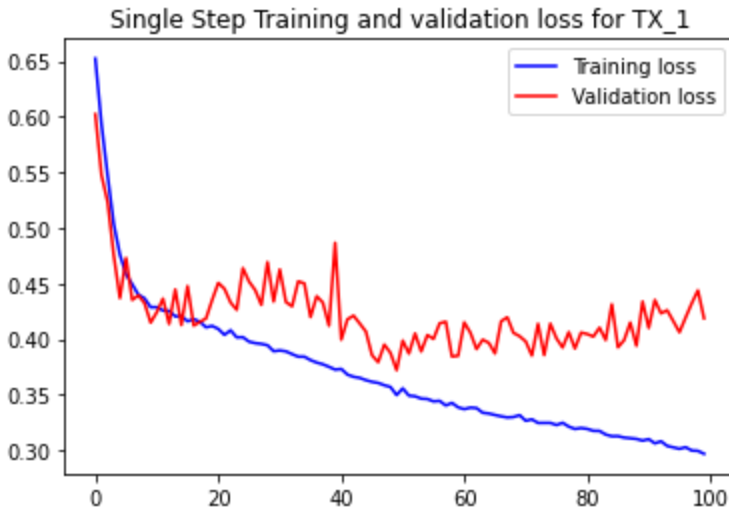
Epoch 12/100  
50/50 [=====] - 3s 56ms/step - loss: 0.4259 - val\_loss: 0.4365  
Epoch 13/100  
50/50 [=====] - 3s 57ms/step - loss: 0.4254 - val\_loss: 0.4138  
Epoch 14/100  
50/50 [=====] - 3s 57ms/step - loss: 0.4206 - val\_loss: 0.4447  
Epoch 15/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4209 - val\_loss: 0.4128  
Epoch 16/100  
50/50 [=====] - 3s 56ms/step - loss: 0.4161 - val\_loss: 0.4478  
Epoch 17/100  
50/50 [=====] - 3s 56ms/step - loss: 0.4182 - val\_loss: 0.4123  
Epoch 18/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4158 - val\_loss: 0.4156  
Epoch 19/100  
50/50 [=====] - 3s 56ms/step - loss: 0.4107 - val\_loss: 0.4187  
Epoch 20/100  
50/50 [=====] - 3s 54ms/step - loss: 0.4120 - val\_loss: 0.4353  
Epoch 21/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4093 - val\_loss: 0.4507  
Epoch 22/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4040 - val\_loss: 0.4454  
Epoch 23/100  
50/50 [=====] - 3s 56ms/step - loss: 0.4081 - val\_loss: 0.4330  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.4017 - val\_loss: 0.4265  
Epoch 25/100  
50/50 [=====] - 3s 54ms/step - loss: 0.4019 - val\_loss: 0.4639  
Epoch 26/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3979 - val\_loss: 0.4519  
Epoch 27/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3966 - val\_loss: 0.4443  
Epoch 28/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3959 - val\_loss: 0.4309  
Epoch 29/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3947 - val\_loss: 0.4694  
Epoch 30/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3893 - val\_loss: 0.4339  
Epoch 31/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3900 - val\_loss: 0.4628  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3891 - val\_loss: 0.4335  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3867 - val\_loss: 0.4296  
Epoch 34/100

50/50 [=====] - 3s 53ms/step - loss: 0.3844 - val\_loss: 0.4521  
Epoch 35/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3844 - val\_loss: 0.4502  
Epoch 36/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3813 - val\_loss: 0.4200  
Epoch 37/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3791 - val\_loss: 0.4387  
Epoch 38/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3776 - val\_loss: 0.4330  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3753 - val\_loss: 0.4122  
Epoch 40/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3728 - val\_loss: 0.4867  
Epoch 41/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3734 - val\_loss: 0.3997  
Epoch 42/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3683 - val\_loss: 0.4180  
Epoch 43/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3663 - val\_loss: 0.4212  
Epoch 44/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3653 - val\_loss: 0.4142  
Epoch 45/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3633 - val\_loss: 0.4070  
Epoch 46/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3618 - val\_loss: 0.3857  
Epoch 47/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3608 - val\_loss: 0.3794  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3587 - val\_loss: 0.3952  
Epoch 49/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3572 - val\_loss: 0.3878  
Epoch 50/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3499 - val\_loss: 0.3723  
Epoch 51/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3559 - val\_loss: 0.3988  
Epoch 52/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3494 - val\_loss: 0.3872  
Epoch 53/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3488 - val\_loss: 0.4052  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3467 - val\_loss: 0.3891  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3464 - val\_loss: 0.4038  
Epoch 56/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3442 - val\_loss: 0.4004



Epoch 57/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3447 - val\_loss: 0.4144  
Epoch 58/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3405 - val\_loss: 0.4158  
Epoch 59/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3429 - val\_loss: 0.3846  
Epoch 60/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3389 - val\_loss: 0.3852  
Epoch 61/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3373 - val\_loss: 0.4152  
Epoch 62/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3386 - val\_loss: 0.4059  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3382 - val\_loss: 0.3912  
Epoch 64/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3340 - val\_loss: 0.3996  
Epoch 65/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3333 - val\_loss: 0.3968  
Epoch 66/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3320 - val\_loss: 0.3873  
Epoch 67/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3308 - val\_loss: 0.4162  
Epoch 68/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3298 - val\_loss: 0.4198  
Epoch 69/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3301 - val\_loss: 0.4058  
Epoch 70/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3319 - val\_loss: 0.4028  
Epoch 71/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3268 - val\_loss: 0.3981  
Epoch 72/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3281 - val\_loss: 0.3854  
Epoch 73/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3249 - val\_loss: 0.4139  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3249 - val\_loss: 0.3858  
Epoch 75/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3249 - val\_loss: 0.4141  
Epoch 76/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3230 - val\_loss: 0.4008  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3250 - val\_loss: 0.3926  
Epoch 78/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3215 - val\_loss: 0.4065  
Epoch 79/100

50/50 [=====] - 3s 50ms/step - loss: 0.3195 - val\_loss: 0.3917  
Epoch 80/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3203 - val\_loss: 0.4060  
Epoch 81/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3195 - val\_loss: 0.4047  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3178 - val\_loss: 0.4024  
Epoch 83/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3177 - val\_loss: 0.4105  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3144 - val\_loss: 0.3994  
Epoch 85/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3129 - val\_loss: 0.4315  
Epoch 86/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3130 - val\_loss: 0.3928  
Epoch 87/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3117 - val\_loss: 0.3992  
Epoch 88/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3111 - val\_loss: 0.4150  
Epoch 89/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3105 - val\_loss: 0.3942  
Epoch 90/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3090 - val\_loss: 0.4339  
Epoch 91/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3103 - val\_loss: 0.4102  
Epoch 92/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3065 - val\_loss: 0.4353  
Epoch 93/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3084 - val\_loss: 0.4234  
Epoch 94/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3042 - val\_loss: 0.4261  
Epoch 95/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3029 - val\_loss: 0.4163  
Epoch 96/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3016 - val\_loss: 0.4063  
Epoch 97/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3030 - val\_loss: 0.4195  
Epoch 98/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3001 - val\_loss: 0.4323  
Epoch 99/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2998 - val\_loss: 0.4439  
Epoch 100/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2971 - val\_loss: 0.4189



TX\_1 - True Future: 4107

TX\_1 - Model Prediction: 3649

TX\_1 - Model Percentage Error: 11.15%

=====

Training for TX\_3

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 59ms/step - loss: 0.6050 - val\_loss: 0.5410

Epoch 2/100

50/50 [=====] - 3s 52ms/step - loss: 0.5404 - val\_loss: 0.5134

Epoch 3/100

50/50 [=====] - 3s 51ms/step - loss: 0.5000 - val\_loss: 0.4858

Epoch 4/100

50/50 [=====] - 3s 50ms/step - loss: 0.4708 - val\_loss: 0.4323

Epoch 5/100  
50/50 [=====] - 3s 50ms/step - loss: 0.4450 - val\_loss: 0.4484  
Epoch 6/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4300 - val\_loss: 0.4745  
Epoch 7/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4221 - val\_loss: 0.4401  
Epoch 8/100  
50/50 [=====] - 2s 50ms/step - loss: 0.4152 - val\_loss: 0.4173  
Epoch 9/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4122 - val\_loss: 0.4605  
Epoch 10/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4056 - val\_loss: 0.4215  
Epoch 11/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4068 - val\_loss: 0.4199  
Epoch 12/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4032 - val\_loss: 0.4344  
Epoch 13/100  
50/50 [=====] - 3s 50ms/step - loss: 0.4005 - val\_loss: 0.4131  
Epoch 14/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4018 - val\_loss: 0.3871  
Epoch 15/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3977 - val\_loss: 0.4285  
Epoch 16/100  
50/50 [=====] - 2s 50ms/step - loss: 0.4001 - val\_loss: 0.4072  
Epoch 17/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3938 - val\_loss: 0.4156  
Epoch 18/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3959 - val\_loss: 0.4140  
Epoch 19/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3915 - val\_loss: 0.4005  
Epoch 20/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3937 - val\_loss: 0.3993  
Epoch 21/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3915 - val\_loss: 0.3928  
Epoch 22/100  
50/50 [=====] - 2s 48ms/step - loss: 0.3844 - val\_loss: 0.3957  
Epoch 23/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3904 - val\_loss: 0.4284  
Epoch 24/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3906 - val\_loss: 0.4152  
Epoch 25/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3845 - val\_loss: 0.4026  
Epoch 26/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3854 - val\_loss: 0.3964  
Epoch 27/100

50/50 [=====] - 3s 50ms/step - loss: 0.3843 - val\_loss: 0.4028  
Epoch 28/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3818 - val\_loss: 0.4183  
Epoch 29/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3793 - val\_loss: 0.3964  
Epoch 30/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3812 - val\_loss: 0.3984  
Epoch 31/100  
50/50 [=====] - 2s 49ms/step - loss: 0.3777 - val\_loss: 0.4114  
Epoch 32/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3767 - val\_loss: 0.4074  
Epoch 33/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3747 - val\_loss: 0.3938  
Epoch 34/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3740 - val\_loss: 0.4057  
Epoch 35/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3728 - val\_loss: 0.4228  
Epoch 36/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3695 - val\_loss: 0.4164  
Epoch 37/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3698 - val\_loss: 0.4055  
Epoch 38/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3682 - val\_loss: 0.4200  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3660 - val\_loss: 0.4130  
Epoch 40/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3644 - val\_loss: 0.3997  
Epoch 41/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3628 - val\_loss: 0.4194  
Epoch 42/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3633 - val\_loss: 0.4359  
Epoch 43/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3590 - val\_loss: 0.4311  
Epoch 44/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3595 - val\_loss: 0.4116  
Epoch 45/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3568 - val\_loss: 0.4496  
Epoch 46/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3564 - val\_loss: 0.3989  
Epoch 47/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3537 - val\_loss: 0.4250  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3541 - val\_loss: 0.3856  
Epoch 49/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3546 - val\_loss: 0.3970

Epoch 50/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3484 - val\_loss: 0.4135  
Epoch 51/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3504 - val\_loss: 0.4070  
Epoch 52/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3479 - val\_loss: 0.3969  
Epoch 53/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3476 - val\_loss: 0.4058  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3452 - val\_loss: 0.4241  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3422 - val\_loss: 0.4202  
Epoch 56/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3430 - val\_loss: 0.4217  
Epoch 57/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3380 - val\_loss: 0.4064  
Epoch 58/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3395 - val\_loss: 0.4199  
Epoch 59/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3339 - val\_loss: 0.4232  
Epoch 60/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3345 - val\_loss: 0.4122  
Epoch 61/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3335 - val\_loss: 0.4300  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3293 - val\_loss: 0.4235  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3305 - val\_loss: 0.4211  
Epoch 64/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3266 - val\_loss: 0.4286  
Epoch 65/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3247 - val\_loss: 0.4156  
Epoch 66/100  
50/50 [=====] - 2s 50ms/step - loss: 0.3253 - val\_loss: 0.4231  
Epoch 67/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3225 - val\_loss: 0.4223  
Epoch 68/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3228 - val\_loss: 0.4257  
Epoch 69/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3203 - val\_loss: 0.4273  
Epoch 70/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3169 - val\_loss: 0.4275  
Epoch 71/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3204 - val\_loss: 0.4257  
Epoch 72/100

50/50 [=====] - 3s 52ms/step - loss: 0.3161 - val\_loss: 0.4228  
Epoch 73/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3155 - val\_loss: 0.4242  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3122 - val\_loss: 0.4314  
Epoch 75/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3113 - val\_loss: 0.4338  
Epoch 76/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3125 - val\_loss: 0.4303  
Epoch 77/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3108 - val\_loss: 0.4321  
Epoch 78/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3093 - val\_loss: 0.4366  
Epoch 79/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3058 - val\_loss: 0.4346  
Epoch 80/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3049 - val\_loss: 0.4365  
Epoch 81/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3041 - val\_loss: 0.4360  
Epoch 82/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3040 - val\_loss: 0.4404  
Epoch 83/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3034 - val\_loss: 0.4387  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3010 - val\_loss: 0.4451  
Epoch 85/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3003 - val\_loss: 0.4405  
Epoch 86/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2999 - val\_loss: 0.4410  
Epoch 87/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2950 - val\_loss: 0.4427  
Epoch 88/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2962 - val\_loss: 0.4390  
Epoch 89/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2967 - val\_loss: 0.4349  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2934 - val\_loss: 0.4379  
Epoch 91/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2927 - val\_loss: 0.4385  
Epoch 92/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2913 - val\_loss: 0.4460  
Epoch 93/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2891 - val\_loss: 0.4473  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2927 - val\_loss: 0.4463

Epoch 95/100

50/50 [=====] - 3s 52ms/step - loss: 0.2847 - val\_loss: 0.4374

Epoch 96/100

50/50 [=====] - 3s 53ms/step - loss: 0.2876 - val\_loss: 0.4373

Epoch 97/100

50/50 [=====] - 3s 51ms/step - loss: 0.2884 - val\_loss: 0.4370

Epoch 98/100

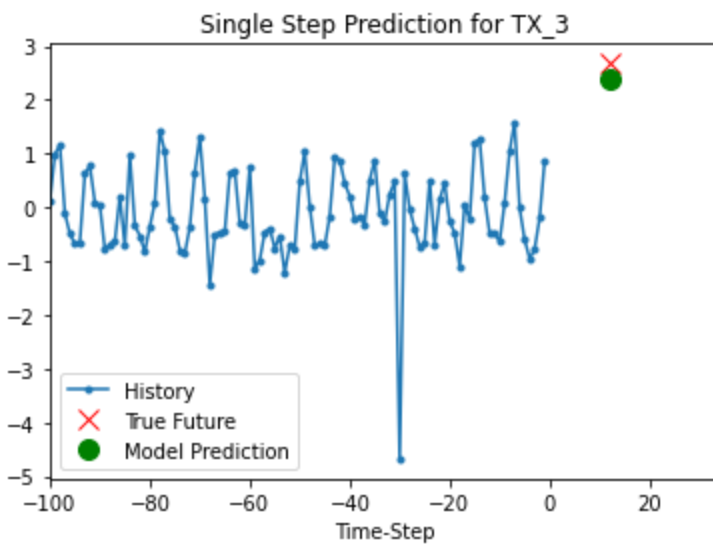
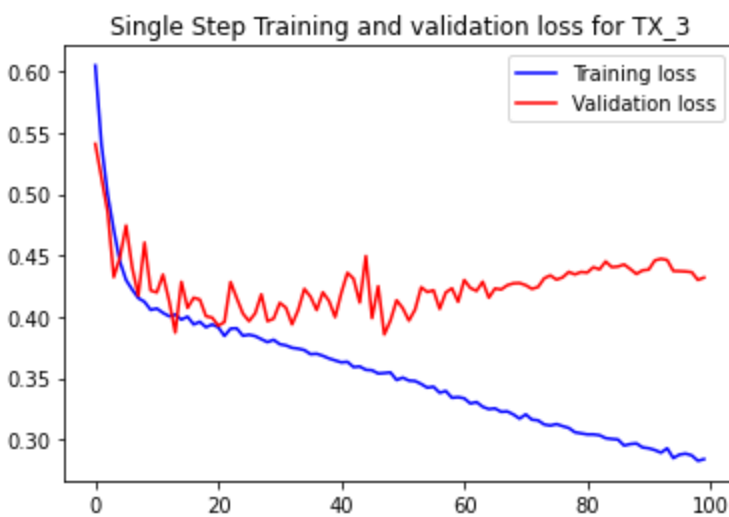
50/50 [=====] - 3s 52ms/step - loss: 0.2869 - val\_loss: 0.4364

Epoch 99/100

50/50 [=====] - 3s 51ms/step - loss: 0.2825 - val\_loss: 0.4301

Epoch 100/100

50/50 [=====] - 3s 50ms/step - loss: 0.2839 - val\_loss: 0.4320



TX\_3 - True Future: 4929

TX\_3 - Model Prediction: 4733

TX\_3 - Model Percentage Error: 3.98%



=====

Training for TX\_2

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 61ms/step - loss: 0.6413 - val\_loss: 0.5696

Epoch 2/100

50/50 [=====] - 3s 53ms/step - loss: 0.5605 - val\_loss: 0.5049

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.5102 - val\_loss: 0.4644

Epoch 4/100

50/50 [=====] - 3s 57ms/step - loss: 0.4696 - val\_loss: 0.4299

Epoch 5/100

50/50 [=====] - 4s 84ms/step - loss: 0.4542 - val\_loss: 0.4230

Epoch 6/100

50/50 [=====] - 3s 67ms/step - loss: 0.4399 - val\_loss: 0.4213

Epoch 7/100

50/50 [=====] - 3s 56ms/step - loss: 0.4347 - val\_loss: 0.4295

Epoch 8/100

50/50 [=====] - 3s 57ms/step - loss: 0.4274 - val\_loss: 0.4262

Epoch 9/100

50/50 [=====] - 3s 56ms/step - loss: 0.4229 - val\_loss: 0.4272

Epoch 10/100

50/50 [=====] - 3s 56ms/step - loss: 0.4183 - val\_loss: 0.4237

Epoch 11/100

50/50 [=====] - 3s 56ms/step - loss: 0.4191 - val\_loss: 0.4346

Epoch 12/100

50/50 [=====] - 3s 57ms/step - loss: 0.4175 - val\_loss: 0.4279

Epoch 13/100

50/50 [=====] - 3s 56ms/step - loss: 0.4129 - val\_loss: 0.4277

Epoch 14/100

50/50 [=====] - 3s 56ms/step - loss: 0.4126 - val\_loss: 0.4274

Epoch 15/100

50/50 [=====] - 3s 55ms/step - loss: 0.4109 - val\_loss: 0.4323

Epoch 16/100

50/50 [=====] - 3s 55ms/step - loss: 0.4078 - val\_loss: 0.4356

Epoch 17/100

50/50 [=====] - 3s 54ms/step - loss: 0.4081 - val\_loss: 0.4215

Epoch 18/100

50/50 [=====] - 3s 55ms/step - loss: 0.4037 - val\_loss: 0.4137

Epoch 19/100

50/50 [=====] - 3s 53ms/step - loss: 0.4039 - val\_loss: 0.4421

Epoch 20/100

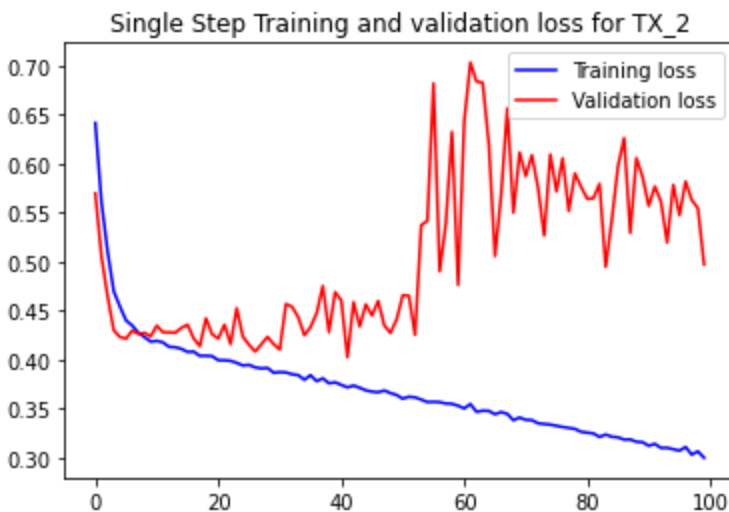
50/50 [=====] - 3s 54ms/step - loss: 0.4035 - val\_loss: 0.4258

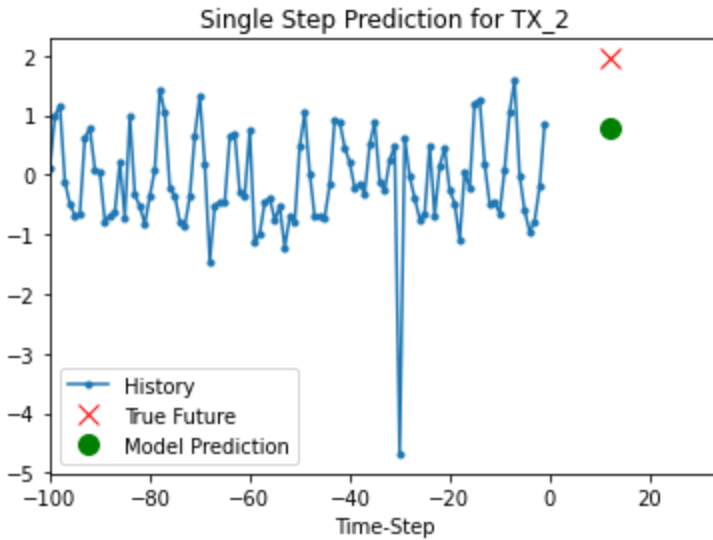
Epoch 21/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3993 - val\_loss: 0.4214  
Epoch 22/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3993 - val\_loss: 0.4356  
Epoch 23/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3987 - val\_loss: 0.4158  
Epoch 24/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3966 - val\_loss: 0.4524  
Epoch 25/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3939 - val\_loss: 0.4233  
Epoch 26/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3946 - val\_loss: 0.4151  
Epoch 27/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3920 - val\_loss: 0.4082  
Epoch 28/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3910 - val\_loss: 0.4155  
Epoch 29/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3915 - val\_loss: 0.4232  
Epoch 30/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3865 - val\_loss: 0.4158  
Epoch 31/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3872 - val\_loss: 0.4101  
Epoch 32/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3869 - val\_loss: 0.4567  
Epoch 33/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3850 - val\_loss: 0.4539  
Epoch 34/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3841 - val\_loss: 0.4432  
Epoch 35/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3794 - val\_loss: 0.4248  
Epoch 36/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3841 - val\_loss: 0.4331  
Epoch 37/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3780 - val\_loss: 0.4472  
Epoch 38/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3809 - val\_loss: 0.4751  
Epoch 39/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3758 - val\_loss: 0.4279  
Epoch 40/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3768 - val\_loss: 0.4687  
Epoch 41/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3742 - val\_loss: 0.4605  
Epoch 42/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3716 - val\_loss: 0.4024  
Epoch 43/100

50/50 [=====] - 3s 55ms/step - loss: 0.3735 - val\_loss: 0.4585  
Epoch 44/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3713 - val\_loss: 0.4338  
Epoch 45/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3686 - val\_loss: 0.4562  
Epoch 46/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3673 - val\_loss: 0.4449  
Epoch 47/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3667 - val\_loss: 0.4598  
Epoch 48/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3684 - val\_loss: 0.4348  
Epoch 49/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3658 - val\_loss: 0.4271  
Epoch 50/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3639 - val\_loss: 0.4408  
Epoch 51/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3601 - val\_loss: 0.4656  
Epoch 52/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3621 - val\_loss: 0.4650  
Epoch 53/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3614 - val\_loss: 0.4252  
Epoch 54/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3592 - val\_loss: 0.5370  
Epoch 55/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3567 - val\_loss: 0.5414  
Epoch 56/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3569 - val\_loss: 0.6817  
Epoch 57/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3566 - val\_loss: 0.4899  
Epoch 58/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3552 - val\_loss: 0.5384  
Epoch 59/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3548 - val\_loss: 0.6322  
Epoch 60/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3529 - val\_loss: 0.4761  
Epoch 61/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3501 - val\_loss: 0.6431  
Epoch 62/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3546 - val\_loss: 0.7030  
Epoch 63/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3467 - val\_loss: 0.6835  
Epoch 64/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3479 - val\_loss: 0.6824  
Epoch 65/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3476 - val\_loss: 0.6197

Epoch 66/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3442 - val\_loss: 0.5055  
Epoch 67/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3465 - val\_loss: 0.5679  
Epoch 68/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3447 - val\_loss: 0.6561  
Epoch 69/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3382 - val\_loss: 0.5498  
Epoch 70/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3409 - val\_loss: 0.6112  
Epoch 71/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3386 - val\_loss: 0.5871  
Epoch 72/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3383 - val\_loss: 0.6084  
Epoch 73/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3350 - val\_loss: 0.5754  
Epoch 74/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3343 - val\_loss: 0.5264  
Epoch 75/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3337 - val\_loss: 0.6092  
Epoch 76/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3324 - val\_loss: 0.5714  
Epoch 77/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3313 - val\_loss: 0.6053  
Epoch 78/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3303 - val\_loss: 0.5515  
Epoch 79/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3293 - val\_loss: 0.5898  
Epoch 80/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3263 - val\_loss: 0.5762  
Epoch 81/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3255 - val\_loss: 0.5640  
Epoch 82/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3247 - val\_loss: 0.5644  
Epoch 83/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3211 - val\_loss: 0.5792  
Epoch 84/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3235 - val\_loss: 0.4945  
Epoch 85/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3213 - val\_loss: 0.5422  
Epoch 86/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3207 - val\_loss: 0.5969  
Epoch 87/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3183 - val\_loss: 0.6259  
Epoch 88/100

50/50 [=====] - 3s 57ms/step - loss: 0.3185 - val\_loss: 0.5292  
Epoch 89/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3162 - val\_loss: 0.6055  
Epoch 90/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3158 - val\_loss: 0.5863  
Epoch 91/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3121 - val\_loss: 0.5567  
Epoch 92/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3140 - val\_loss: 0.5766  
Epoch 93/100  
50/50 [=====] - 3s 59ms/step - loss: 0.3098 - val\_loss: 0.5610  
Epoch 94/100  
50/50 [=====] - 3s 57ms/step - loss: 0.3100 - val\_loss: 0.5194  
Epoch 95/100  
50/50 [=====] - 3s 58ms/step - loss: 0.3086 - val\_loss: 0.5782  
Epoch 96/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3071 - val\_loss: 0.5472  
Epoch 97/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3108 - val\_loss: 0.5816  
Epoch 98/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3031 - val\_loss: 0.5628  
Epoch 99/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3064 - val\_loss: 0.5544  
Epoch 100/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2998 - val\_loss: 0.4971





TX\_2 - True Future: 5327

TX\_2 - Model Prediction: 4381

TX\_2 - Model Percentage Error: 17.76%

=====

Training for WI\_1

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 60ms/step - loss: 0.5264 - val\_loss: 0.7299

Epoch 2/100

50/50 [=====] - 3s 52ms/step - loss: 0.4337 - val\_loss: 0.6169

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.3969 - val\_loss: 0.5435

Epoch 4/100

50/50 [=====] - 3s 52ms/step - loss: 0.3628 - val\_loss: 0.4939

Epoch 5/100

50/50 [=====] - 3s 50ms/step - loss: 0.3326 - val\_loss: 0.4526

Epoch 6/100

50/50 [=====] - 3s 52ms/step - loss: 0.3221 - val\_loss: 0.4154

Epoch 7/100

50/50 [=====] - 3s 53ms/step - loss: 0.3144 - val\_loss: 0.4174

Epoch 8/100

50/50 [=====] - 3s 52ms/step - loss: 0.3120 - val\_loss: 0.4057

Epoch 9/100

50/50 [=====] - 3s 52ms/step - loss: 0.3080 - val\_loss: 0.4038

Epoch 10/100

50/50 [=====] - 3s 53ms/step - loss: 0.3053 - val\_loss: 0.3805

Epoch 11/100

50/50 [=====] - 3s 52ms/step - loss: 0.3009 - val\_loss: 0.3905

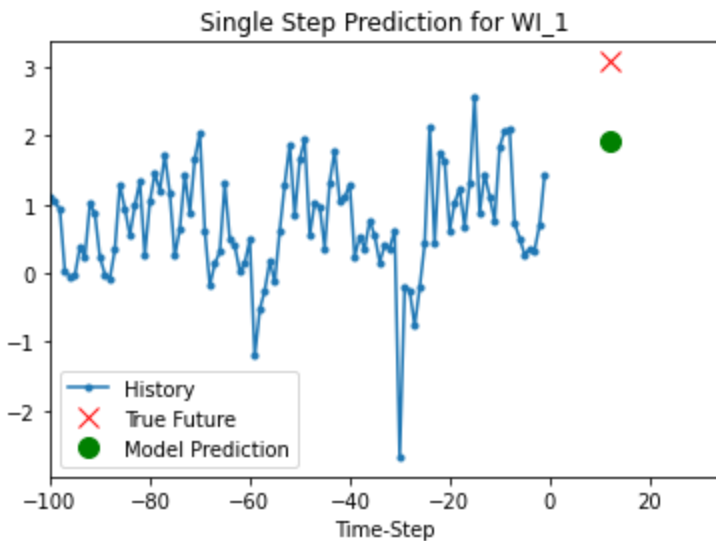
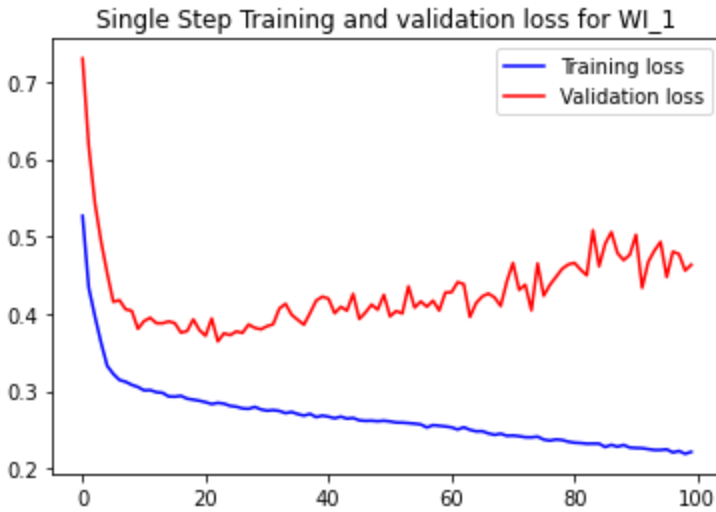
Epoch 12/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3013 - val\_loss: 0.3947  
Epoch 13/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2985 - val\_loss: 0.3878  
Epoch 14/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2977 - val\_loss: 0.3876  
Epoch 15/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2930 - val\_loss: 0.3900  
Epoch 16/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2928 - val\_loss: 0.3878  
Epoch 17/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2938 - val\_loss: 0.3756  
Epoch 18/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2902 - val\_loss: 0.3775  
Epoch 19/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2889 - val\_loss: 0.3927  
Epoch 20/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2875 - val\_loss: 0.3789  
Epoch 21/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2857 - val\_loss: 0.3714  
Epoch 22/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2832 - val\_loss: 0.3938  
Epoch 23/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2848 - val\_loss: 0.3642  
Epoch 24/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2837 - val\_loss: 0.3747  
Epoch 25/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2809 - val\_loss: 0.3723  
Epoch 26/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2798 - val\_loss: 0.3771  
Epoch 27/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2776 - val\_loss: 0.3752  
Epoch 28/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2770 - val\_loss: 0.3860  
Epoch 29/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2795 - val\_loss: 0.3817  
Epoch 30/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2763 - val\_loss: 0.3798  
Epoch 31/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2746 - val\_loss: 0.3838  
Epoch 32/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2754 - val\_loss: 0.3864  
Epoch 33/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2743 - val\_loss: 0.4067  
Epoch 34/100

50/50 [=====] - 3s 52ms/step - loss: 0.2715 - val\_loss: 0.4128  
Epoch 35/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2730 - val\_loss: 0.3987  
Epoch 36/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2703 - val\_loss: 0.3921  
Epoch 37/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2683 - val\_loss: 0.3858  
Epoch 38/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2705 - val\_loss: 0.4009  
Epoch 39/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2663 - val\_loss: 0.4169  
Epoch 40/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2683 - val\_loss: 0.4221  
Epoch 41/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2669 - val\_loss: 0.4194  
Epoch 42/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2648 - val\_loss: 0.4005  
Epoch 43/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2670 - val\_loss: 0.4089  
Epoch 44/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2643 - val\_loss: 0.4040  
Epoch 45/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2652 - val\_loss: 0.4256  
Epoch 46/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2622 - val\_loss: 0.3932  
Epoch 47/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2615 - val\_loss: 0.4014  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2617 - val\_loss: 0.4118  
Epoch 49/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2610 - val\_loss: 0.4052  
Epoch 50/100  
50/50 [=====] - 3s 50ms/step - loss: 0.2617 - val\_loss: 0.4244  
Epoch 51/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2607 - val\_loss: 0.3965  
Epoch 52/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2594 - val\_loss: 0.4035  
Epoch 53/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2592 - val\_loss: 0.4003  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2586 - val\_loss: 0.4354  
Epoch 55/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2578 - val\_loss: 0.4079  
Epoch 56/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2569 - val\_loss: 0.4158



Epoch 57/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2529 - val\_loss: 0.4091  
Epoch 58/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2560 - val\_loss: 0.4168  
Epoch 59/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2551 - val\_loss: 0.4041  
Epoch 60/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2543 - val\_loss: 0.4274  
Epoch 61/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2531 - val\_loss: 0.4277  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2503 - val\_loss: 0.4408  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2532 - val\_loss: 0.4382  
Epoch 64/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2499 - val\_loss: 0.3958  
Epoch 65/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2479 - val\_loss: 0.4138  
Epoch 66/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2482 - val\_loss: 0.4223  
Epoch 67/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2453 - val\_loss: 0.4261  
Epoch 68/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2434 - val\_loss: 0.4210  
Epoch 69/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2449 - val\_loss: 0.4100  
Epoch 70/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2422 - val\_loss: 0.4416  
Epoch 71/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2425 - val\_loss: 0.4656  
Epoch 72/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2417 - val\_loss: 0.4307  
Epoch 73/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2403 - val\_loss: 0.4375  
Epoch 74/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2402 - val\_loss: 0.4044  
Epoch 75/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2411 - val\_loss: 0.4649  
Epoch 76/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2373 - val\_loss: 0.4232  
Epoch 77/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2360 - val\_loss: 0.4372  
Epoch 78/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2374 - val\_loss: 0.4476  
Epoch 79/100

50/50 [=====] - 3s 52ms/step - loss: 0.2367 - val\_loss: 0.4580  
Epoch 80/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2345 - val\_loss: 0.4637  
Epoch 81/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2332 - val\_loss: 0.4657  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2328 - val\_loss: 0.4570  
Epoch 83/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2319 - val\_loss: 0.4497  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2321 - val\_loss: 0.5079  
Epoch 85/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2320 - val\_loss: 0.4613  
Epoch 86/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2276 - val\_loss: 0.4905  
Epoch 87/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2305 - val\_loss: 0.5056  
Epoch 88/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2280 - val\_loss: 0.4782  
Epoch 89/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2303 - val\_loss: 0.4692  
Epoch 90/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2269 - val\_loss: 0.4762  
Epoch 91/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2264 - val\_loss: 0.5020  
Epoch 92/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2262 - val\_loss: 0.4334  
Epoch 93/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2249 - val\_loss: 0.4670  
Epoch 94/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2238 - val\_loss: 0.4816  
Epoch 95/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2239 - val\_loss: 0.4928  
Epoch 96/100  
50/50 [=====] - 2s 50ms/step - loss: 0.2246 - val\_loss: 0.4474  
Epoch 97/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2206 - val\_loss: 0.4802  
Epoch 98/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2225 - val\_loss: 0.4771  
Epoch 99/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2189 - val\_loss: 0.4558  
Epoch 100/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2214 - val\_loss: 0.4633



WI\_1 - True Future: 5490

WI\_1 - Model Prediction: 4408

WI\_1 - Model Percentage Error: 19.71%

=====

Training for WI\_3

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 60ms/step - loss: 0.7014 - val\_loss: 0.8206

Epoch 2/100

50/50 [=====] - 3s 52ms/step - loss: 0.6349 - val\_loss: 0.7219

Epoch 3/100

50/50 [=====] - 3s 52ms/step - loss: 0.5980 - val\_loss: 0.6335

Epoch 4/100

50/50 [=====] - 3s 51ms/step - loss: 0.5412 - val\_loss: 0.5654

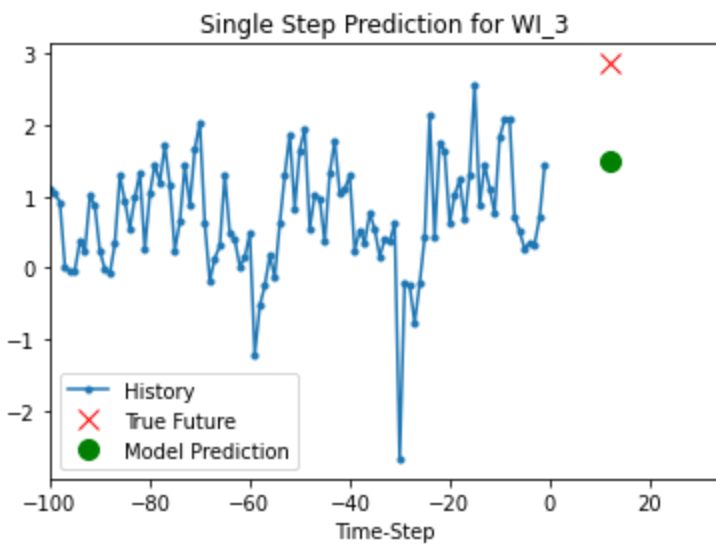
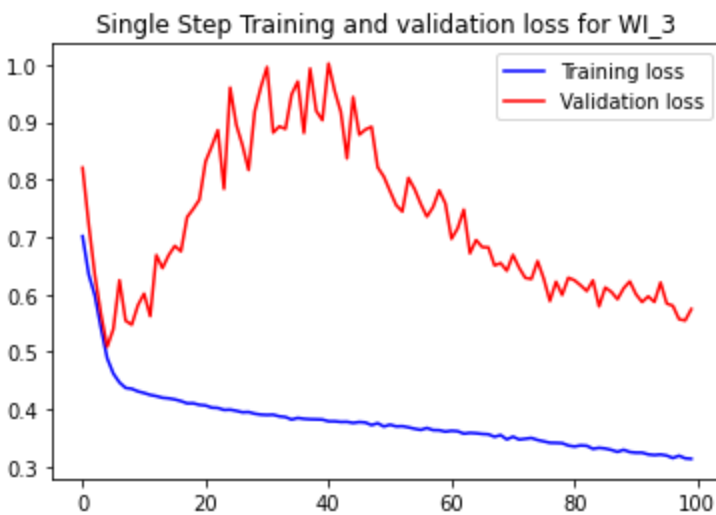
Epoch 5/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4890 - val\_loss: 0.5090  
Epoch 6/100  
50/50 [=====] - 3s 54ms/step - loss: 0.4623 - val\_loss: 0.5397  
Epoch 7/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4468 - val\_loss: 0.6248  
Epoch 8/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4373 - val\_loss: 0.5542  
Epoch 9/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4358 - val\_loss: 0.5473  
Epoch 10/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4313 - val\_loss: 0.5812  
Epoch 11/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4285 - val\_loss: 0.6014  
Epoch 12/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4251 - val\_loss: 0.5622  
Epoch 13/100  
50/50 [=====] - 3s 50ms/step - loss: 0.4230 - val\_loss: 0.6685  
Epoch 14/100  
50/50 [=====] - 2s 50ms/step - loss: 0.4202 - val\_loss: 0.6459  
Epoch 15/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4191 - val\_loss: 0.6683  
Epoch 16/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4172 - val\_loss: 0.6845  
Epoch 17/100  
50/50 [=====] - 3s 51ms/step - loss: 0.4144 - val\_loss: 0.6750  
Epoch 18/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4104 - val\_loss: 0.7347  
Epoch 19/100  
50/50 [=====] - 3s 52ms/step - loss: 0.4106 - val\_loss: 0.7488  
Epoch 20/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4078 - val\_loss: 0.7650  
Epoch 21/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4068 - val\_loss: 0.8316  
Epoch 22/100  
50/50 [=====] - 3s 55ms/step - loss: 0.4030 - val\_loss: 0.8575  
Epoch 23/100  
50/50 [=====] - 3s 53ms/step - loss: 0.4025 - val\_loss: 0.8861  
Epoch 24/100  
50/50 [=====] - 3s 61ms/step - loss: 0.3990 - val\_loss: 0.7838  
Epoch 25/100  
50/50 [=====] - 5s 91ms/step - loss: 0.3994 - val\_loss: 0.9601  
Epoch 26/100  
50/50 [=====] - 4s 72ms/step - loss: 0.3974 - val\_loss: 0.8954  
Epoch 27/100

50/50 [=====] - 3s 51ms/step - loss: 0.3949 - val\_loss: 0.8598  
Epoch 28/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3953 - val\_loss: 0.8166  
Epoch 29/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3924 - val\_loss: 0.9189  
Epoch 30/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3908 - val\_loss: 0.9611  
Epoch 31/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3902 - val\_loss: 0.9959  
Epoch 32/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3907 - val\_loss: 0.8818  
Epoch 33/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3878 - val\_loss: 0.8926  
Epoch 34/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3866 - val\_loss: 0.8881  
Epoch 35/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3822 - val\_loss: 0.9484  
Epoch 36/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3850 - val\_loss: 0.9708  
Epoch 37/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3835 - val\_loss: 0.8811  
Epoch 38/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3828 - val\_loss: 0.9932  
Epoch 39/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3826 - val\_loss: 0.9196  
Epoch 40/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3822 - val\_loss: 0.9034  
Epoch 41/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3792 - val\_loss: 1.0021  
Epoch 42/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3792 - val\_loss: 0.9541  
Epoch 43/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3781 - val\_loss: 0.9179  
Epoch 44/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3783 - val\_loss: 0.8368  
Epoch 45/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3764 - val\_loss: 0.9437  
Epoch 46/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3779 - val\_loss: 0.8780  
Epoch 47/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3771 - val\_loss: 0.8871  
Epoch 48/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3726 - val\_loss: 0.8919  
Epoch 49/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3759 - val\_loss: 0.8213

Epoch 50/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3701 - val\_loss: 0.8051  
Epoch 51/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3733 - val\_loss: 0.7799  
Epoch 52/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3703 - val\_loss: 0.7555  
Epoch 53/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3707 - val\_loss: 0.7444  
Epoch 54/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3687 - val\_loss: 0.8030  
Epoch 55/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3662 - val\_loss: 0.7835  
Epoch 56/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3642 - val\_loss: 0.7575  
Epoch 57/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3675 - val\_loss: 0.7354  
Epoch 58/100  
50/50 [=====] - 3s 55ms/step - loss: 0.3639 - val\_loss: 0.7521  
Epoch 59/100  
50/50 [=====] - 3s 56ms/step - loss: 0.3636 - val\_loss: 0.7813  
Epoch 60/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3613 - val\_loss: 0.7585  
Epoch 61/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3627 - val\_loss: 0.6969  
Epoch 62/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3619 - val\_loss: 0.7150  
Epoch 63/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3577 - val\_loss: 0.7477  
Epoch 64/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3590 - val\_loss: 0.6716  
Epoch 65/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3584 - val\_loss: 0.6948  
Epoch 66/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3572 - val\_loss: 0.6824  
Epoch 67/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3566 - val\_loss: 0.6819  
Epoch 68/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3522 - val\_loss: 0.6506  
Epoch 69/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3552 - val\_loss: 0.6545  
Epoch 70/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3476 - val\_loss: 0.6412  
Epoch 71/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3525 - val\_loss: 0.6688  
Epoch 72/100

50/50 [=====] - 3s 53ms/step - loss: 0.3475 - val\_loss: 0.6465  
Epoch 73/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3488 - val\_loss: 0.6288  
Epoch 74/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3502 - val\_loss: 0.6270  
Epoch 75/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3466 - val\_loss: 0.6581  
Epoch 76/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3443 - val\_loss: 0.6277  
Epoch 77/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3418 - val\_loss: 0.5885  
Epoch 78/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3416 - val\_loss: 0.6221  
Epoch 79/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3411 - val\_loss: 0.5992  
Epoch 80/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3370 - val\_loss: 0.6291  
Epoch 81/100  
50/50 [=====] - 3s 54ms/step - loss: 0.3353 - val\_loss: 0.6247  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3373 - val\_loss: 0.6159  
Epoch 83/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3366 - val\_loss: 0.6060  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3312 - val\_loss: 0.6245  
Epoch 85/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3330 - val\_loss: 0.5792  
Epoch 86/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3318 - val\_loss: 0.6121  
Epoch 87/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3294 - val\_loss: 0.6045  
Epoch 88/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3260 - val\_loss: 0.5917  
Epoch 89/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3296 - val\_loss: 0.6108  
Epoch 90/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3257 - val\_loss: 0.6227  
Epoch 91/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3246 - val\_loss: 0.6003  
Epoch 92/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3246 - val\_loss: 0.5869  
Epoch 93/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3215 - val\_loss: 0.5966  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3204 - val\_loss: 0.5870

Epoch 95/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.3214 - val\_loss: 0.6208  
 Epoch 96/100  
 50/50 [=====] - 3s 51ms/step - loss: 0.3196 - val\_loss: 0.5842  
 Epoch 97/100  
 50/50 [=====] - 3s 52ms/step - loss: 0.3152 - val\_loss: 0.5804  
 Epoch 98/100  
 50/50 [=====] - 3s 53ms/step - loss: 0.3193 - val\_loss: 0.5570  
 Epoch 99/100  
 50/50 [=====] - 3s 53ms/step - loss: 0.3147 - val\_loss: 0.5547  
 Epoch 100/100  
 50/50 [=====] - 3s 53ms/step - loss: 0.3139 - val\_loss: 0.5745



WI\_3 - True Future: 5666  
 WI\_3 - Model Prediction: 4547  
 WI\_3 - Model Percentage Error: 19.75%



=====

Training for WI\_2

Single window of past history : (100, 3)

(72, 1)

Epoch 1/100

50/50 [=====] - 3s 59ms/step - loss: 0.5085 - val\_loss: 0.7180

Epoch 2/100

50/50 [=====] - 3s 51ms/step - loss: 0.4360 - val\_loss: 0.7444

Epoch 3/100

50/50 [=====] - 2s 50ms/step - loss: 0.4061 - val\_loss: 0.6934

Epoch 4/100

50/50 [=====] - 2s 50ms/step - loss: 0.3870 - val\_loss: 0.6510

Epoch 5/100

50/50 [=====] - 3s 51ms/step - loss: 0.3602 - val\_loss: 0.6093

Epoch 6/100

50/50 [=====] - 3s 50ms/step - loss: 0.3480 - val\_loss: 0.6702

Epoch 7/100

50/50 [=====] - 3s 51ms/step - loss: 0.3392 - val\_loss: 0.7006

Epoch 8/100

50/50 [=====] - 3s 51ms/step - loss: 0.3336 - val\_loss: 0.6727

Epoch 9/100

50/50 [=====] - 3s 51ms/step - loss: 0.3334 - val\_loss: 0.7887

Epoch 10/100

50/50 [=====] - 3s 50ms/step - loss: 0.3275 - val\_loss: 0.7389

Epoch 11/100

50/50 [=====] - 3s 51ms/step - loss: 0.3292 - val\_loss: 0.7885

Epoch 12/100

50/50 [=====] - 3s 51ms/step - loss: 0.3228 - val\_loss: 0.7632

Epoch 13/100

50/50 [=====] - 3s 53ms/step - loss: 0.3238 - val\_loss: 0.8462

Epoch 14/100

50/50 [=====] - 3s 52ms/step - loss: 0.3227 - val\_loss: 0.8200

Epoch 15/100

50/50 [=====] - 2s 49ms/step - loss: 0.3196 - val\_loss: 0.7334

Epoch 16/100

50/50 [=====] - 3s 52ms/step - loss: 0.3198 - val\_loss: 0.7797

Epoch 17/100

50/50 [=====] - 3s 53ms/step - loss: 0.3190 - val\_loss: 0.8073

Epoch 18/100

50/50 [=====] - 3s 52ms/step - loss: 0.3168 - val\_loss: 0.7605

Epoch 19/100

50/50 [=====] - 3s 51ms/step - loss: 0.3159 - val\_loss: 0.8688

Epoch 20/100

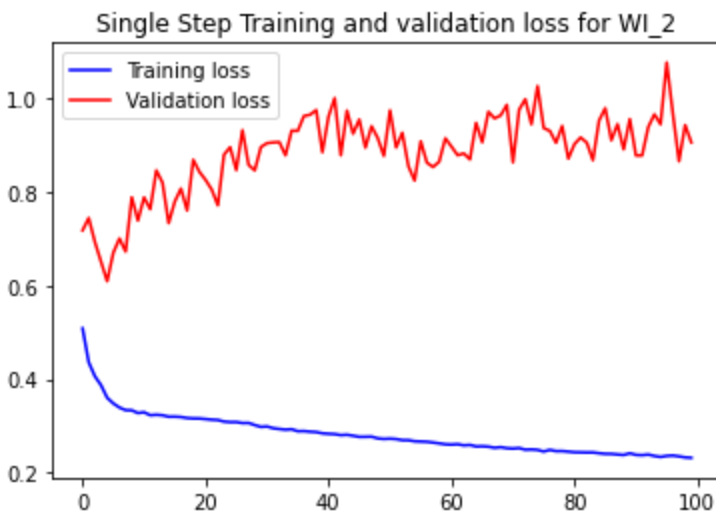
50/50 [=====] - 3s 51ms/step - loss: 0.3158 - val\_loss: 0.8431

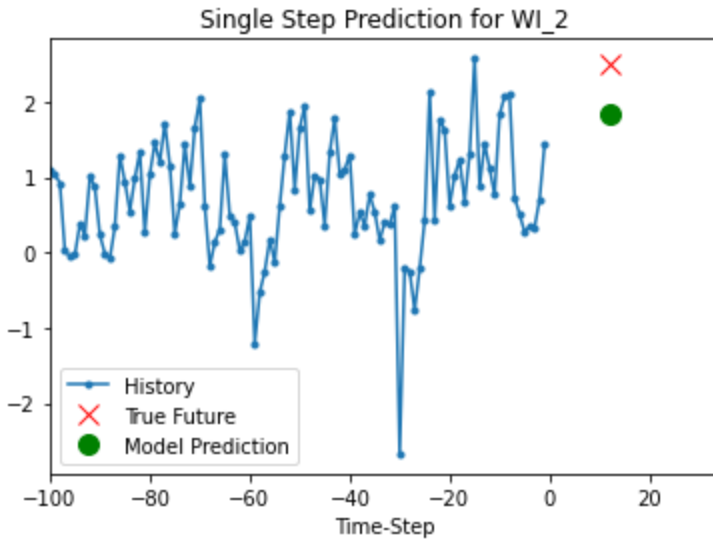
Epoch 21/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3146 - val\_loss: 0.8259  
Epoch 22/100  
50/50 [=====] - 3s 53ms/step - loss: 0.3132 - val\_loss: 0.8053  
Epoch 23/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3126 - val\_loss: 0.7715  
Epoch 24/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3092 - val\_loss: 0.8797  
Epoch 25/100  
50/50 [=====] - 3s 50ms/step - loss: 0.3081 - val\_loss: 0.8958  
Epoch 26/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3082 - val\_loss: 0.8468  
Epoch 27/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3061 - val\_loss: 0.9321  
Epoch 28/100  
50/50 [=====] - 3s 52ms/step - loss: 0.3063 - val\_loss: 0.8580  
Epoch 29/100  
50/50 [=====] - 3s 51ms/step - loss: 0.3017 - val\_loss: 0.8462  
Epoch 30/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2979 - val\_loss: 0.8961  
Epoch 31/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2987 - val\_loss: 0.9044  
Epoch 32/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2950 - val\_loss: 0.9060  
Epoch 33/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2934 - val\_loss: 0.9067  
Epoch 34/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2919 - val\_loss: 0.8784  
Epoch 35/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2928 - val\_loss: 0.9312  
Epoch 36/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2886 - val\_loss: 0.9306  
Epoch 37/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2889 - val\_loss: 0.9625  
Epoch 38/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2875 - val\_loss: 0.9652  
Epoch 39/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2868 - val\_loss: 0.9752  
Epoch 40/100  
50/50 [=====] - 3s 56ms/step - loss: 0.2841 - val\_loss: 0.8850  
Epoch 41/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2831 - val\_loss: 0.9614  
Epoch 42/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2824 - val\_loss: 1.0007  
Epoch 43/100

50/50 [=====] - 3s 53ms/step - loss: 0.2803 - val\_loss: 0.8785  
Epoch 44/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2811 - val\_loss: 0.9740  
Epoch 45/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2789 - val\_loss: 0.9247  
Epoch 46/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2766 - val\_loss: 0.9550  
Epoch 47/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2767 - val\_loss: 0.8948  
Epoch 48/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2770 - val\_loss: 0.9406  
Epoch 49/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2733 - val\_loss: 0.9155  
Epoch 50/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2721 - val\_loss: 0.8772  
Epoch 51/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2728 - val\_loss: 0.9747  
Epoch 52/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2718 - val\_loss: 0.8951  
Epoch 53/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2695 - val\_loss: 0.9266  
Epoch 54/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2694 - val\_loss: 0.8549  
Epoch 55/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2671 - val\_loss: 0.8245  
Epoch 56/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2665 - val\_loss: 0.9084  
Epoch 57/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2660 - val\_loss: 0.8627  
Epoch 58/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2644 - val\_loss: 0.8535  
Epoch 59/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2626 - val\_loss: 0.8649  
Epoch 60/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2606 - val\_loss: 0.9147  
Epoch 61/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2600 - val\_loss: 0.8970  
Epoch 62/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2608 - val\_loss: 0.8786  
Epoch 63/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2584 - val\_loss: 0.8825  
Epoch 64/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2593 - val\_loss: 0.8697  
Epoch 65/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2560 - val\_loss: 0.9478

Epoch 66/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2565 - val\_loss: 0.9063  
Epoch 67/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2556 - val\_loss: 0.9714  
Epoch 68/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2532 - val\_loss: 0.9574  
Epoch 69/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2545 - val\_loss: 0.9637  
Epoch 70/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2523 - val\_loss: 0.9863  
Epoch 71/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2515 - val\_loss: 0.8634  
Epoch 72/100  
50/50 [=====] - 3s 55ms/step - loss: 0.2526 - val\_loss: 0.9760  
Epoch 73/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2491 - val\_loss: 0.9984  
Epoch 74/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2496 - val\_loss: 0.9448  
Epoch 75/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2487 - val\_loss: 1.0265  
Epoch 76/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2452 - val\_loss: 0.9367  
Epoch 77/100  
50/50 [=====] - 3s 54ms/step - loss: 0.2487 - val\_loss: 0.9306  
Epoch 78/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2460 - val\_loss: 0.9053  
Epoch 79/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2462 - val\_loss: 0.9411  
Epoch 80/100  
50/50 [=====] - 3s 51ms/step - loss: 0.2449 - val\_loss: 0.8714  
Epoch 81/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2437 - val\_loss: 0.9025  
Epoch 82/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2435 - val\_loss: 0.9165  
Epoch 83/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2432 - val\_loss: 0.9055  
Epoch 84/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2433 - val\_loss: 0.8680  
Epoch 85/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2416 - val\_loss: 0.9528  
Epoch 86/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2403 - val\_loss: 0.9791  
Epoch 87/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2401 - val\_loss: 0.9106  
Epoch 88/100

50/50 [=====] - 3s 53ms/step - loss: 0.2389 - val\_loss: 0.9451  
Epoch 89/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2378 - val\_loss: 0.8912  
Epoch 90/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2414 - val\_loss: 0.9560  
Epoch 91/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2381 - val\_loss: 0.8780  
Epoch 92/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2375 - val\_loss: 0.8782  
Epoch 93/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2388 - val\_loss: 0.9388  
Epoch 94/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2357 - val\_loss: 0.9661  
Epoch 95/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2336 - val\_loss: 0.9448  
Epoch 96/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2358 - val\_loss: 1.0769  
Epoch 97/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2366 - val\_loss: 0.9679  
Epoch 98/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2348 - val\_loss: 0.8658  
Epoch 99/100  
50/50 [=====] - 3s 53ms/step - loss: 0.2326 - val\_loss: 0.9430  
Epoch 100/100  
50/50 [=====] - 3s 52ms/step - loss: 0.2317 - val\_loss: 0.9061





WI\_2 - True Future: 6348

WI\_2 - Model Prediction: 5526

WI\_2 - Model Percentage Error: 12.95%

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