CHAPTER 5.3.4: Static Step Simulation Test Considering Constant Angle Position Using LSTM and Feedforward NN

Main code to run the LSTM and FNN is gyroscope.mlx. This produces results in Figure 5.20. Simulated data had 60 steps with 24000 points running from -1 to 1 rad/s.

To test with different scenarios, pre-saved networks of LSTM and FNN are used to run.

1. +1 to -1 with halved steps (120 in total) with 48000 points (opp_stepdata.mat)
2. -1 to 2 with same number of steps as the original simulated data (minus1_TO_2_stepdata.mat)
3. Dynamic data from Chapter 5.3.2 (simulated_data.mat)

To try with LSTM, the code is Trial_for_testdatas_LSTM.mlx. Change lines 10 - 12 inorder to test different scenerios.

To try with FNN, the code is Trial_for_testdatas_FNN.mlx. Change lines 10 - 12 inorder to test different scenerios.

Another attempt was to average the steps from the original dataset from -1 to 1 rad/s and train in LSTM and also FNN. With this, use the original data to test the network to see how it behaves. This is with the code average.m