Figure 1(b) (3D Plot):

Run the following command with file neuron-repeats.py:

python neuron-repeats.py --N 15 --M 1 --noise_scale 0.2 --n_iter 50000000 --h_dim 30 --D 10 --lr 0.1 --batch_size=20 —seed=9

Obtain txt file
repeated_log_Final_hidden_dim30_D10_N15_SEED9_lr0.1_noiseScale0.2_batchSize20.txt

Run the commands in jupyter notebook simplicity-plots.ipynb with the txt file retrieved from the previous step

Figure 1(a) (the high-dimensional case):

Run the following command with file label_noise_sgd.py:

python label_noise_sgd.py --N 3 --M 1 --noise_scale 0.03 --n_iter 50000000 --h_dim 10 --D 3 --lr 0.05 --batch_size=3 --seed=9

Obtain txt file
jadid_log_Final_hidden_dim10_D3_N3_SEED9_lr0.05_noiseScale0.03

In jupyter notebook simplicity-plots2.ipynb, run the commands in the first cell, then in the second cell, on the top, uncomment the first extract_values command, which is

iters1, train_loss1, hess_trace1, first_eigen1, second_eigen1, third_eigen1 = extract_values('jadid_log_Final_hidden_dim10_D3_N3_SEED9_lr0.05_noiseScale0.03')

Comment the second extract_values command. then run the second cell with the txt file retrieved from the previous step

Figure 2 (the low-dimensional case):

Run the following command with file label_noise_sgd_2.py:

python label_noise_sgd_2.py --N 6 --M 1 --noise_scale 0.2 --n_iter 20000000 --h_dim 10 --D 5 --lr 0.05 --batch_size=10 --seed=9

Obtain txt file
jadid_log_Final_hidden_dim10_D5_N6_SEED9_lr0.05_noiseScale0.2_batchSize10

In jupyter notebook simplicity-plots2.ipynb, run the commands in the first cell, then in the second cell, on the top, uncomment the second extract_values command, which is

iters1, train_loss1, hess_trace1, first_eigen1, second_eigen1, third_eigen1 = extract_values('jadid_log_Final_hidden_dim10_D5_N6_SEED9_lr0.05_noiseScale0.2_batchSize 10')

Comment the first extract_values command. then run the second cell with the txt file retrieved from the previous step