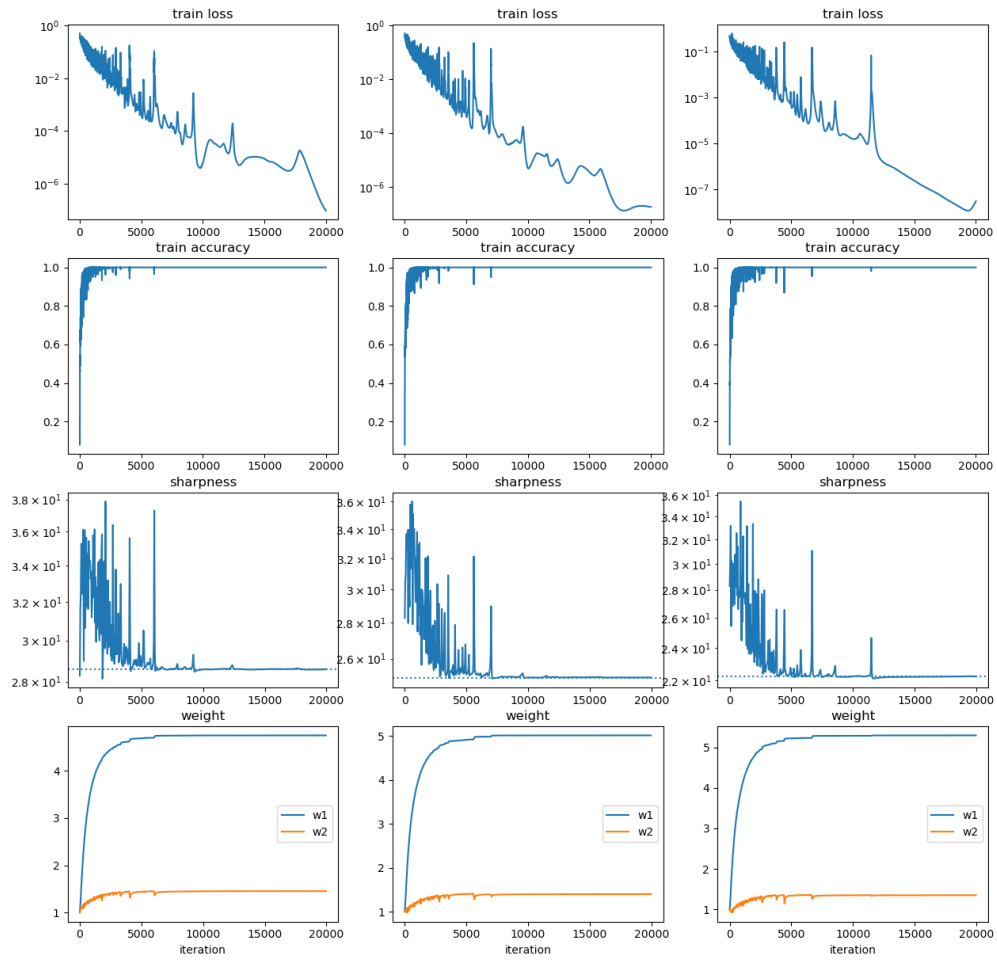
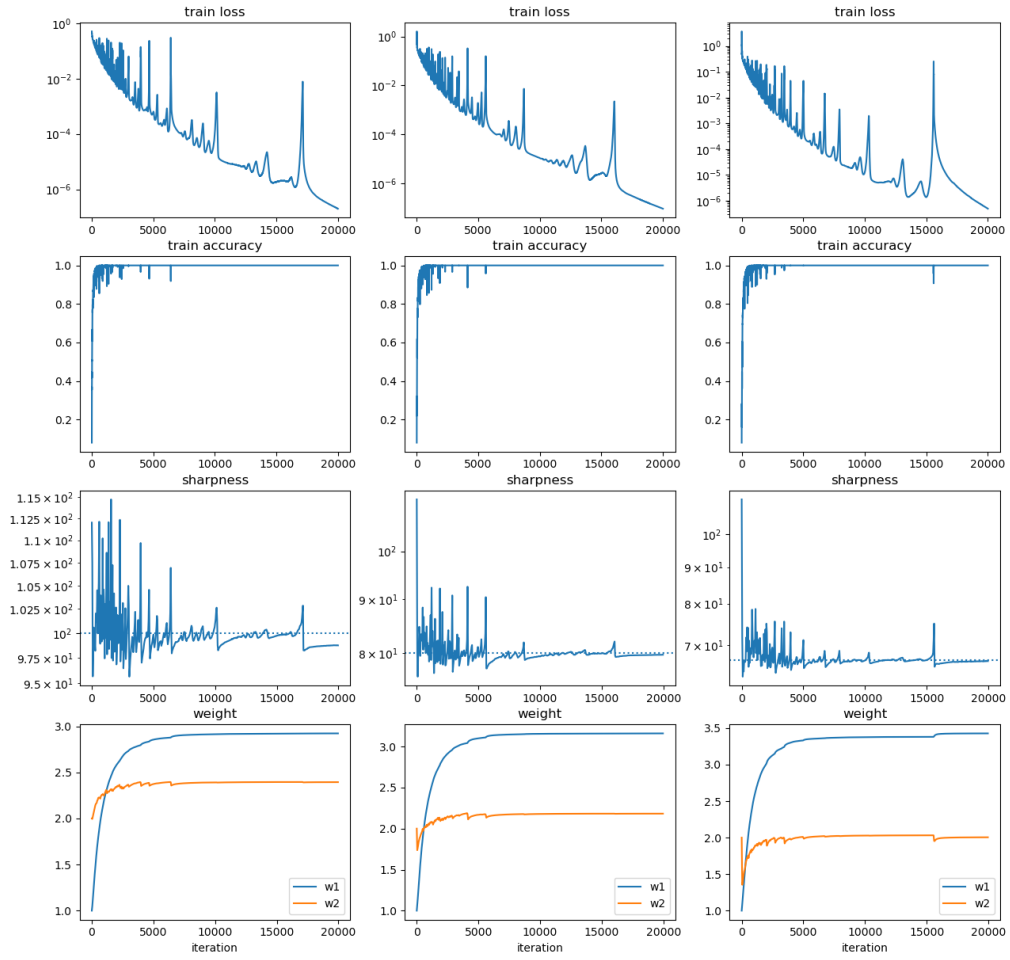


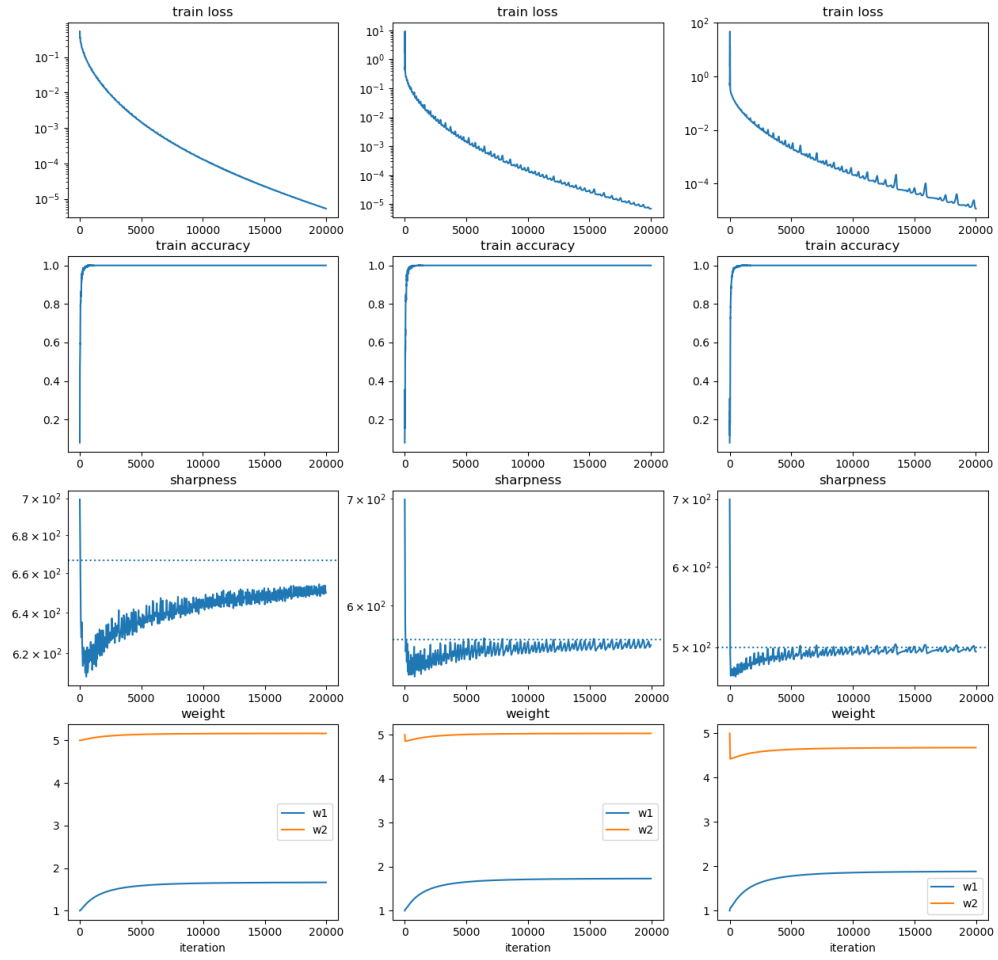
# MSE+ReLU

cifar10-1k/fc-relu-depth1/seed\_0/mse/gd/w1\_1\_w2\_1\_lr\_[0.07 0.08 0.09]

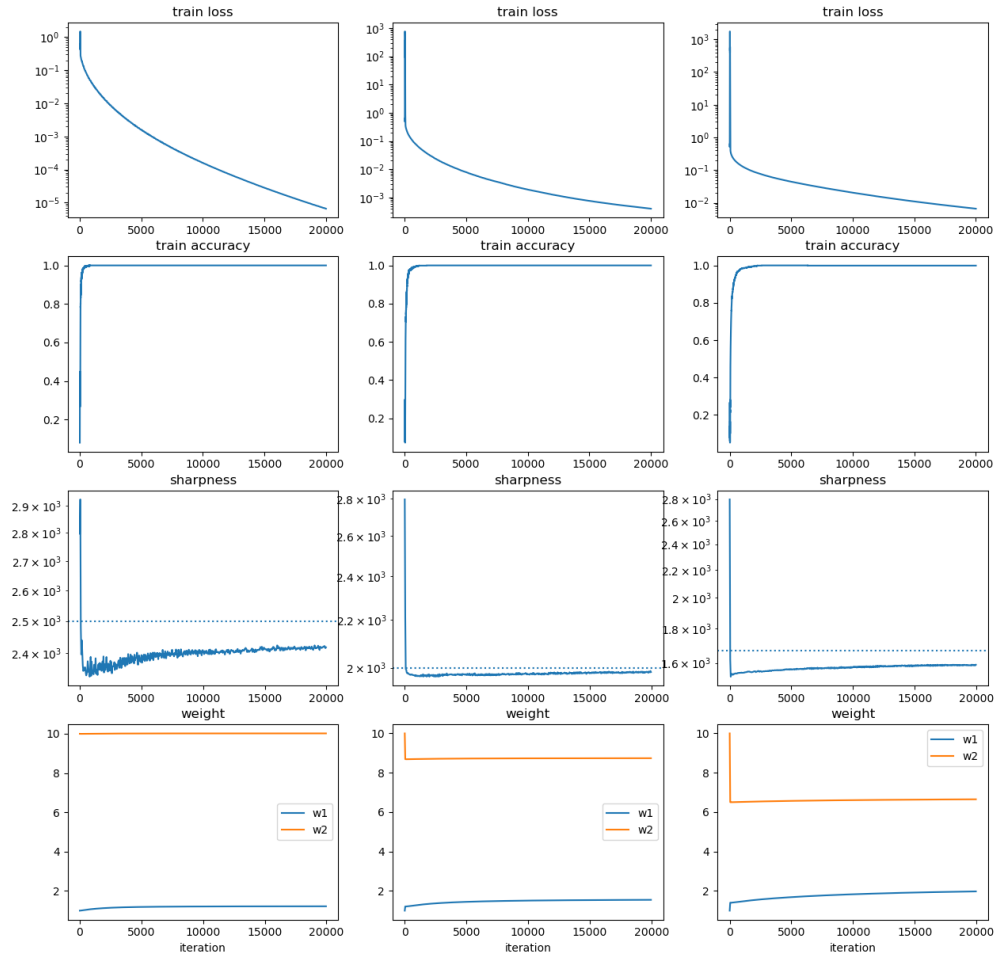


cifar10-1k/fc-relu-depth1/seed\_0/mse/gd/w1\_w2\_lr\_[0.02 0.025 0.03 ]

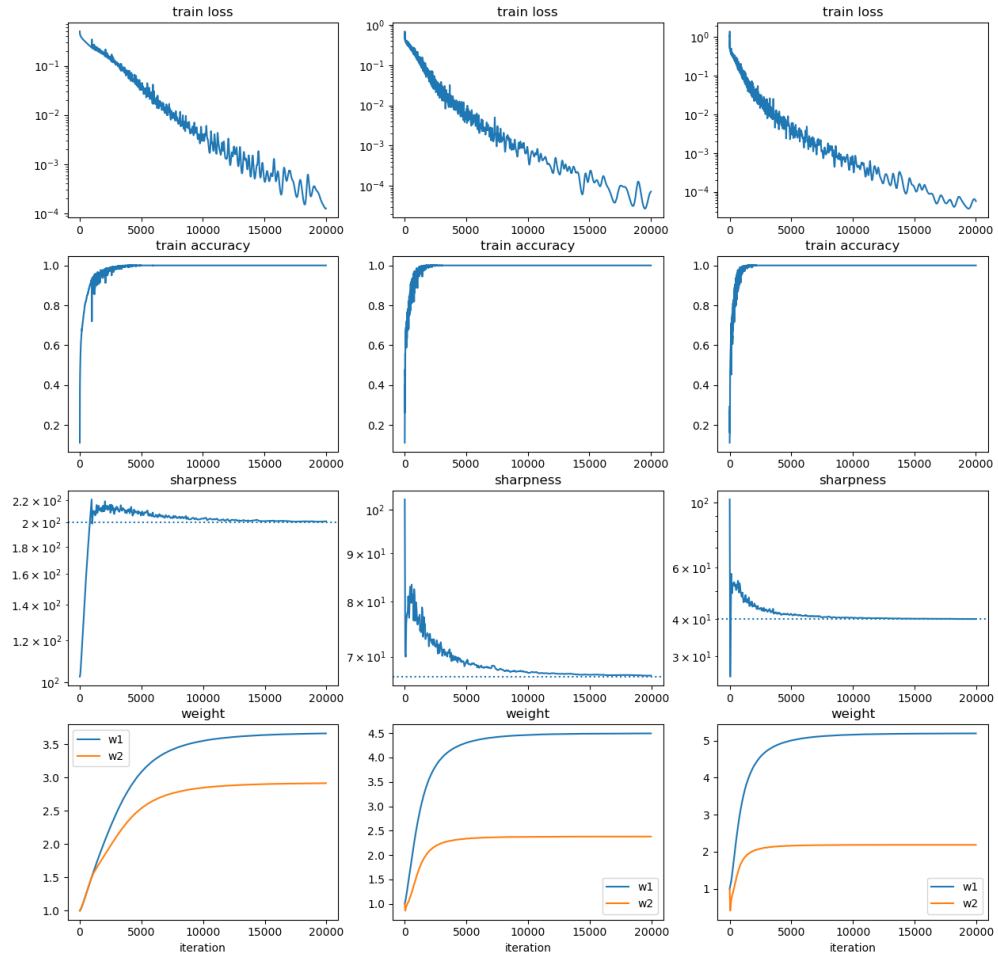




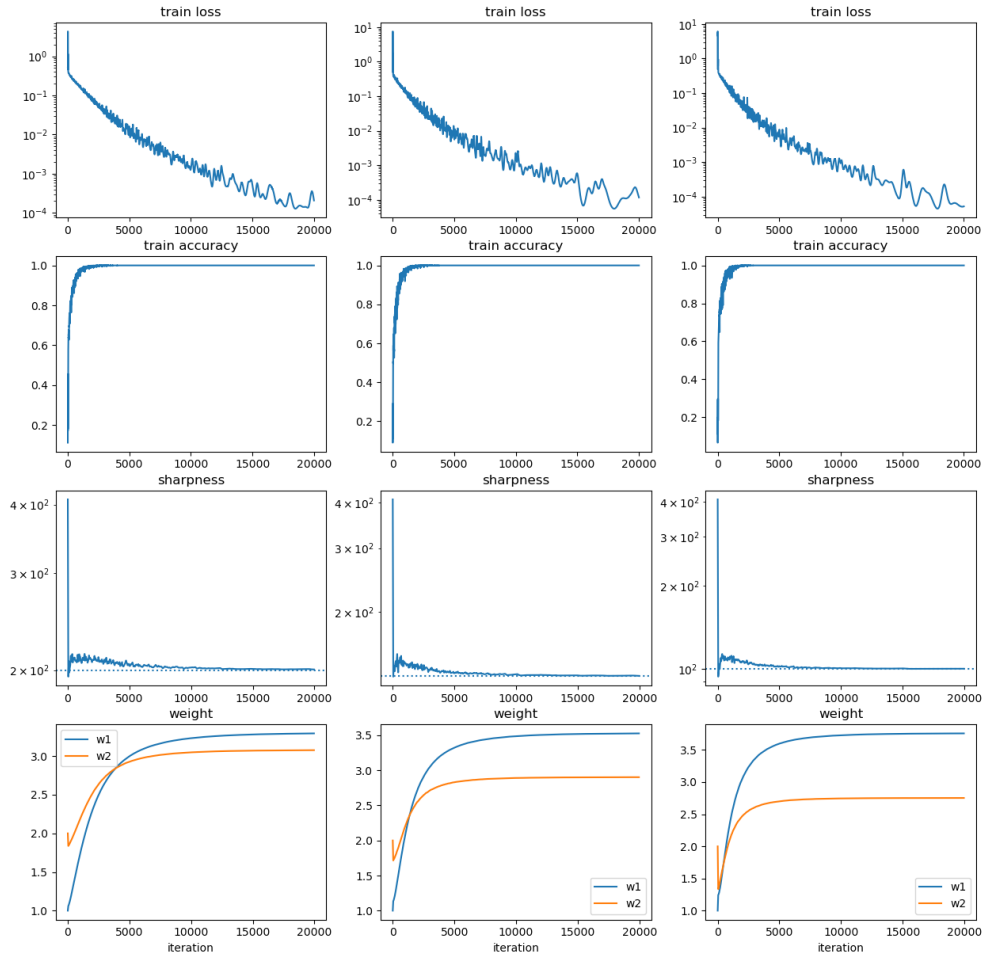
cifar10-1k/fc-relu-depth1/seed\_0/mse/gd/w1\_1\_w2\_10\_lr\_[0.0008 0.001 0.0012]



MSE+Tanh

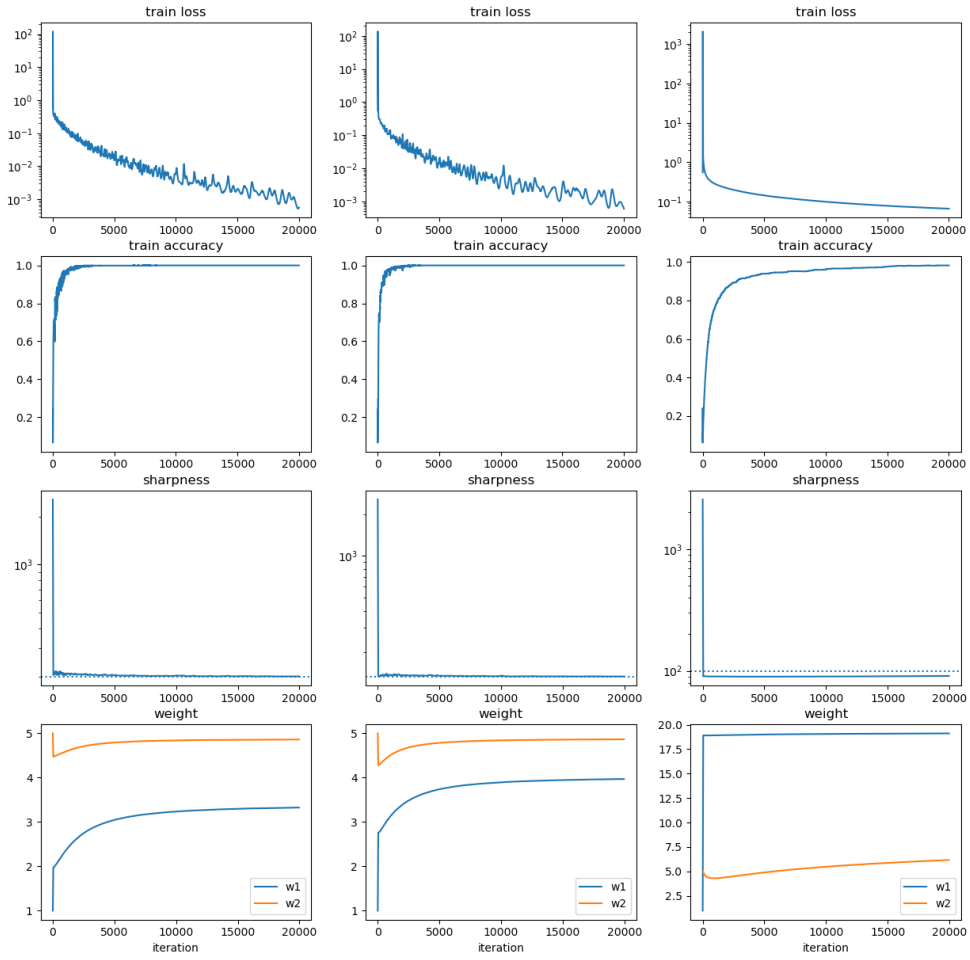


cifar10-1k/fc-tanh-depth1/seed\_0/mse/gd/w1\_1\_w2\_2\_lr\_[0.01 0.015 0.02 ]



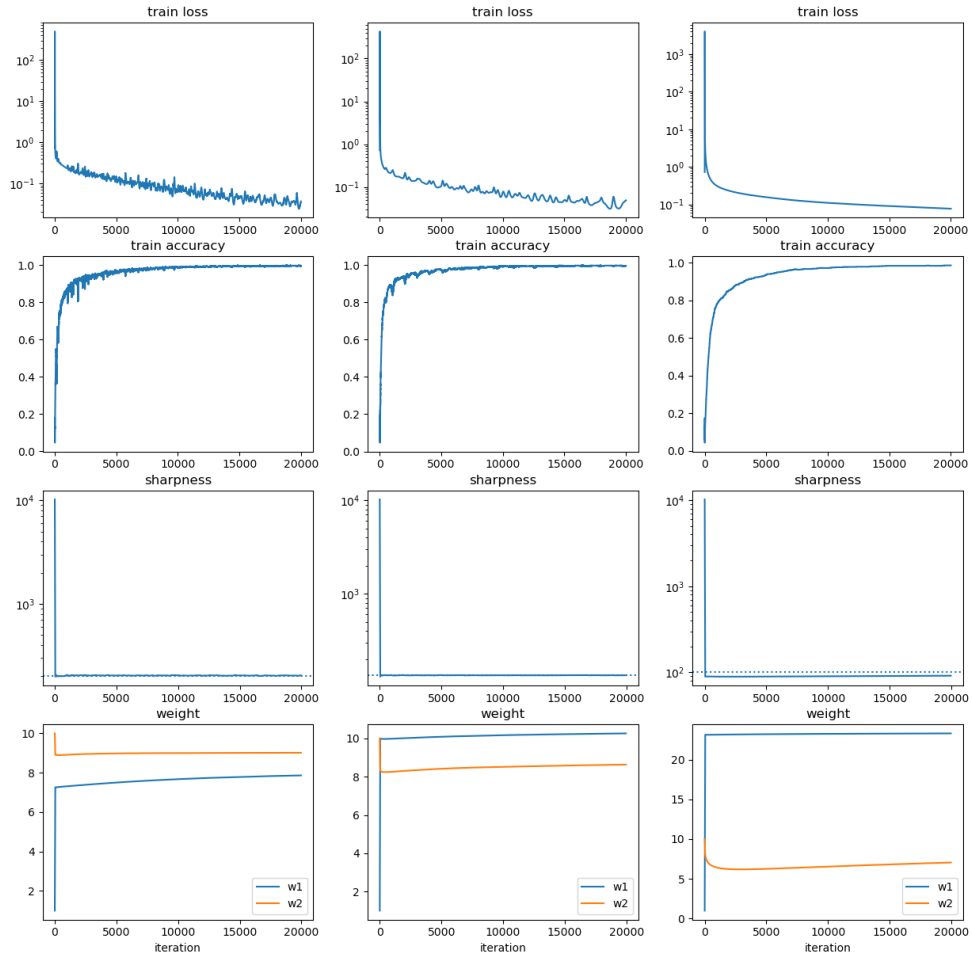
(under train):

cifar10-1k/fc-tanh-depth1/seed\_0/mse/gd/w1\_1\_w2\_5\_lr\_[0.01 0.015 0.02 ]



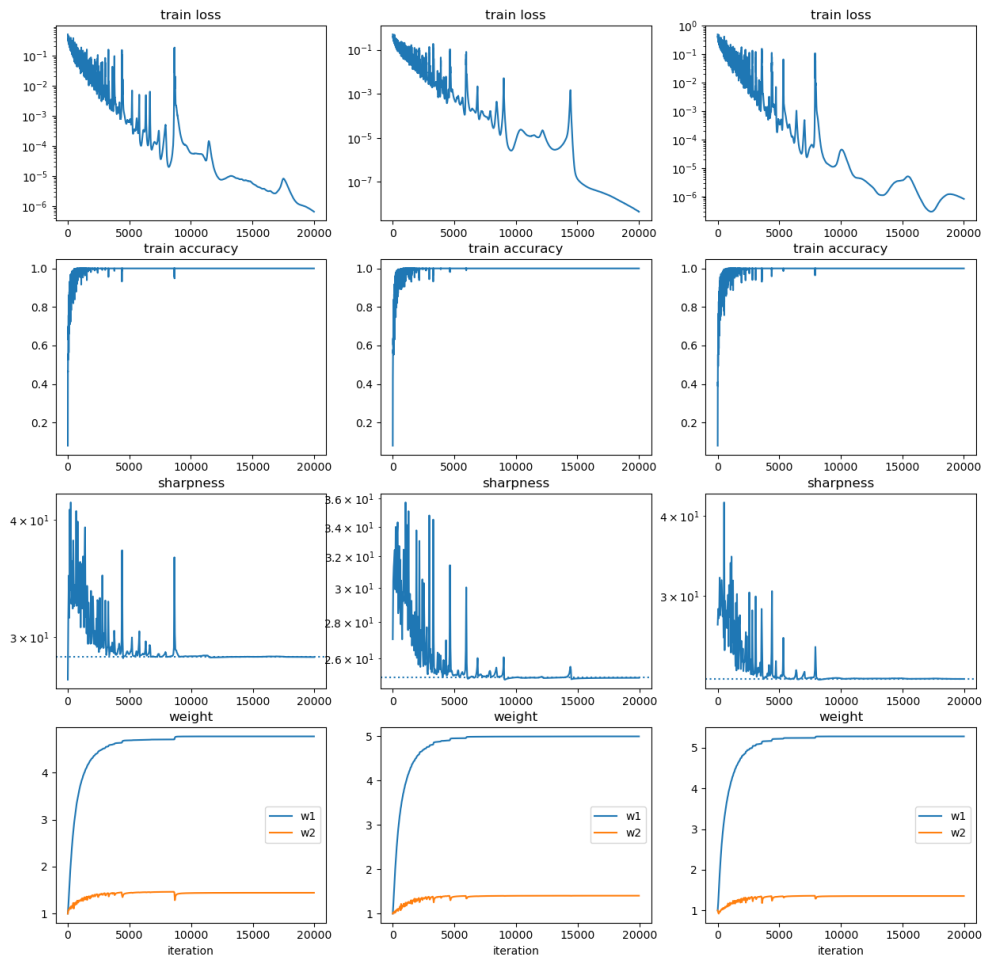
(under train):

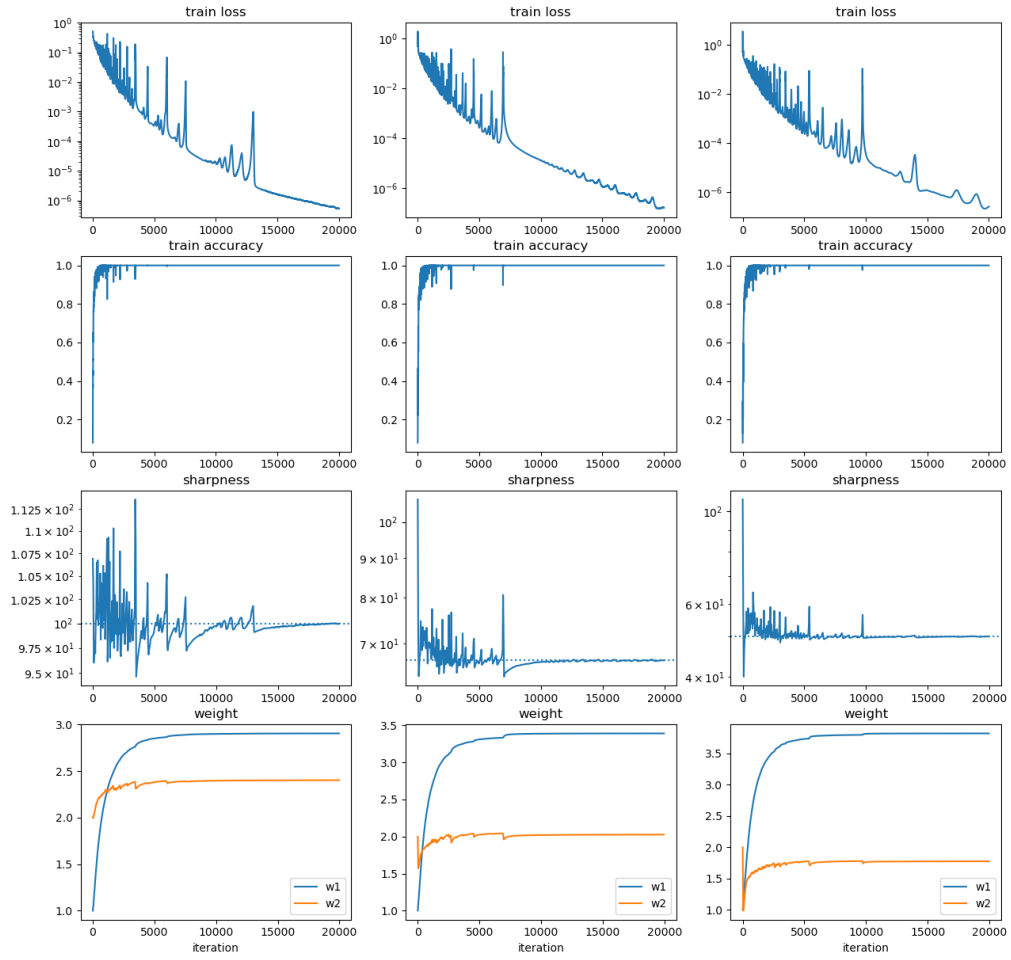
cifar10-1k/fc-tanh-depth1/seed\_0/mse/gd/w1\_1\_w2\_10\_lr\_[0.01 0.015 0.02 ]

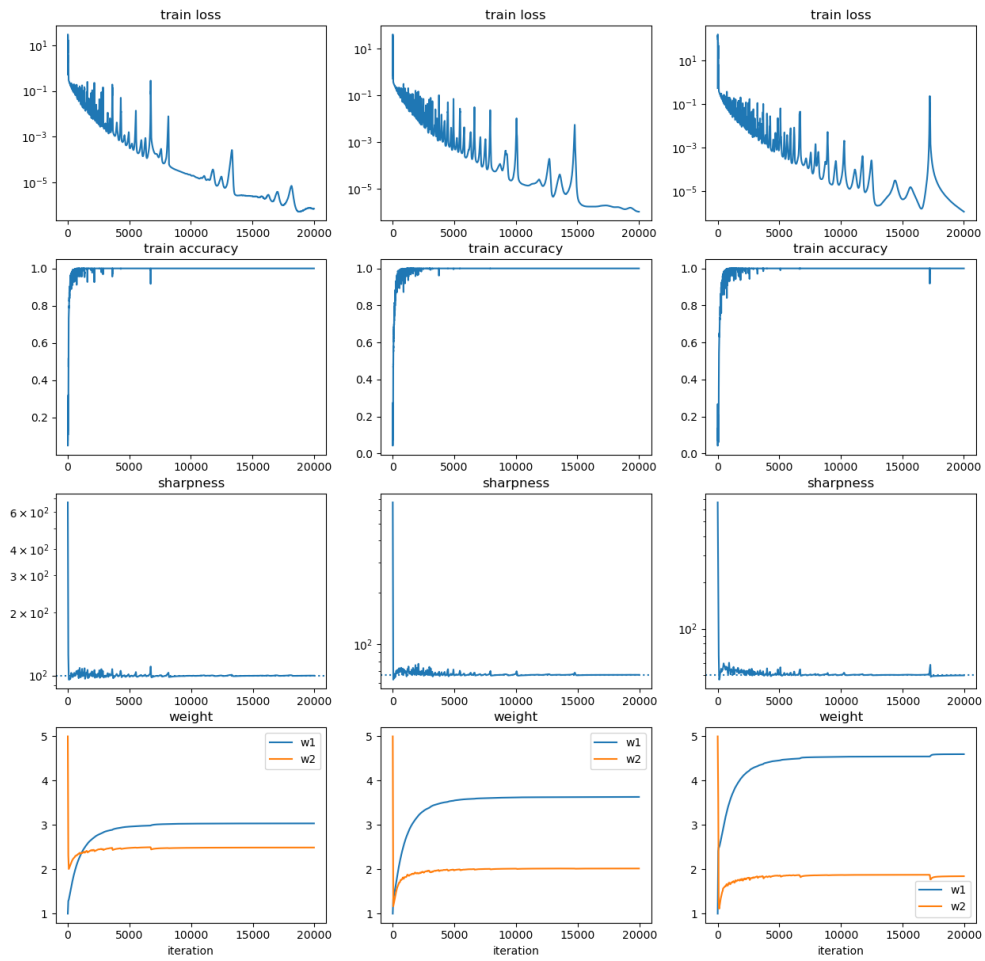


Huber+ReLU

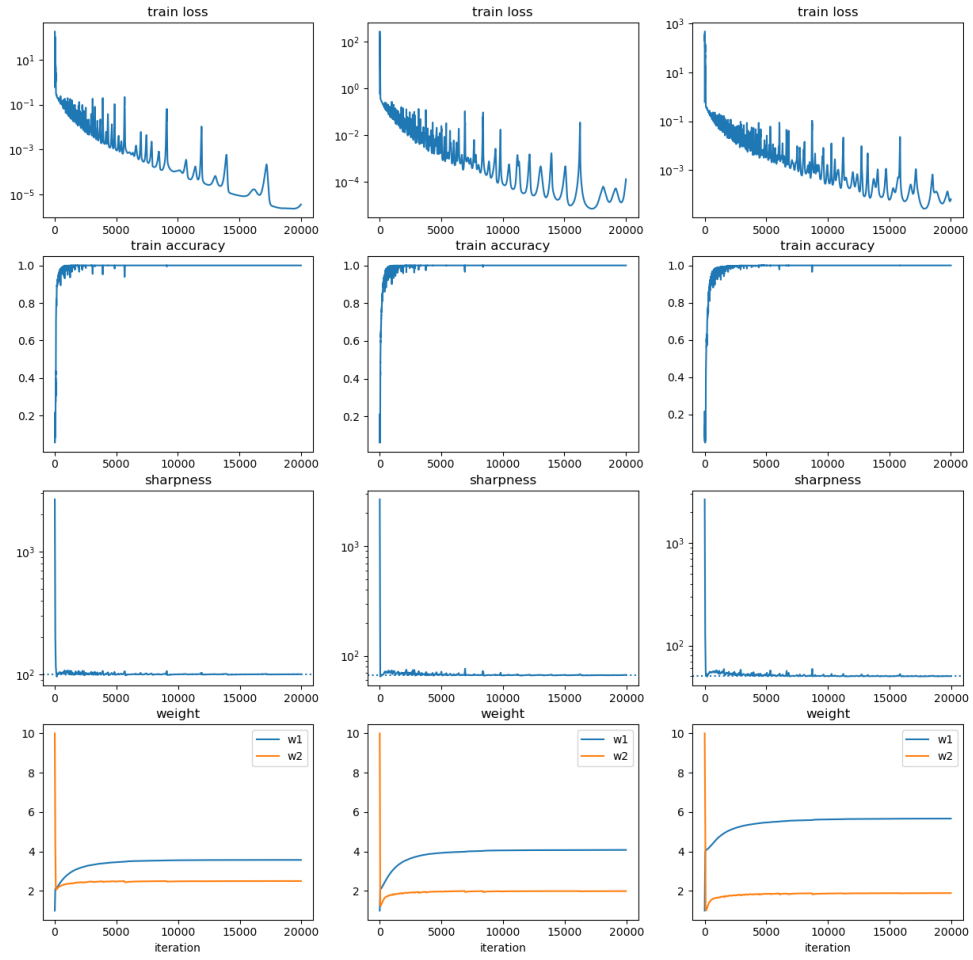




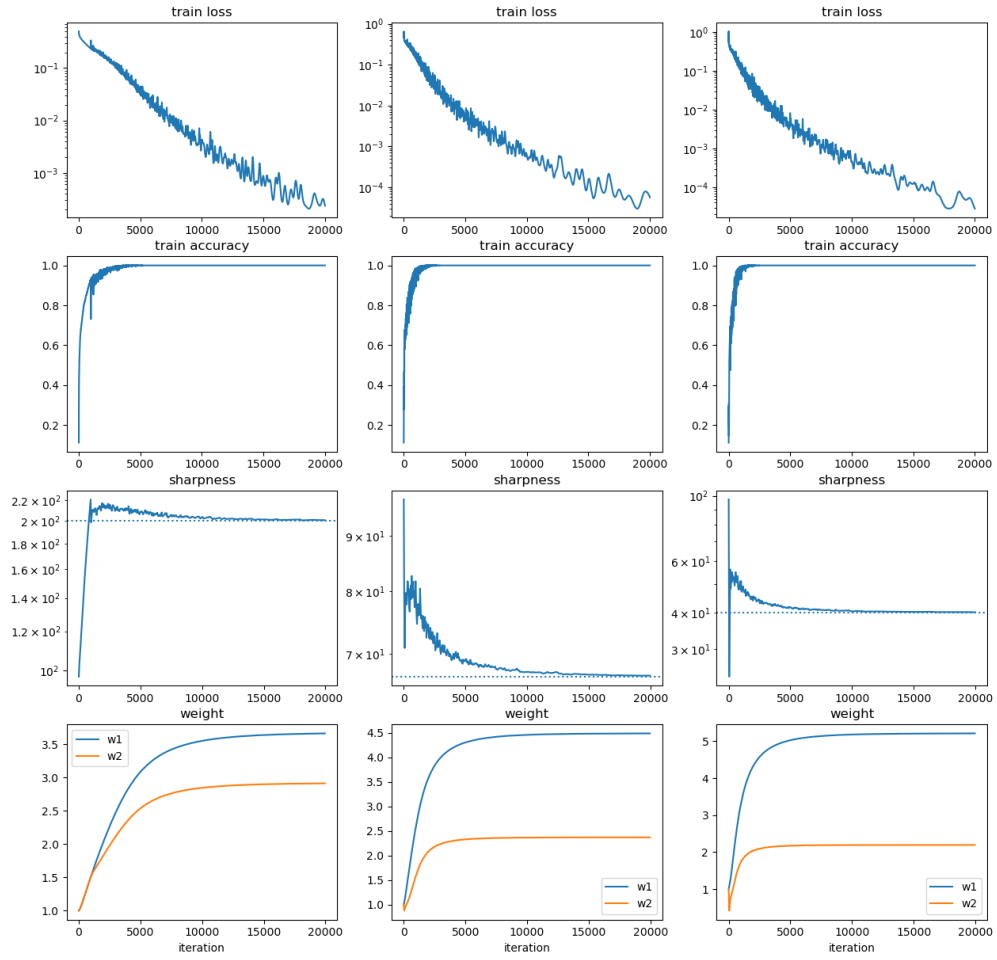




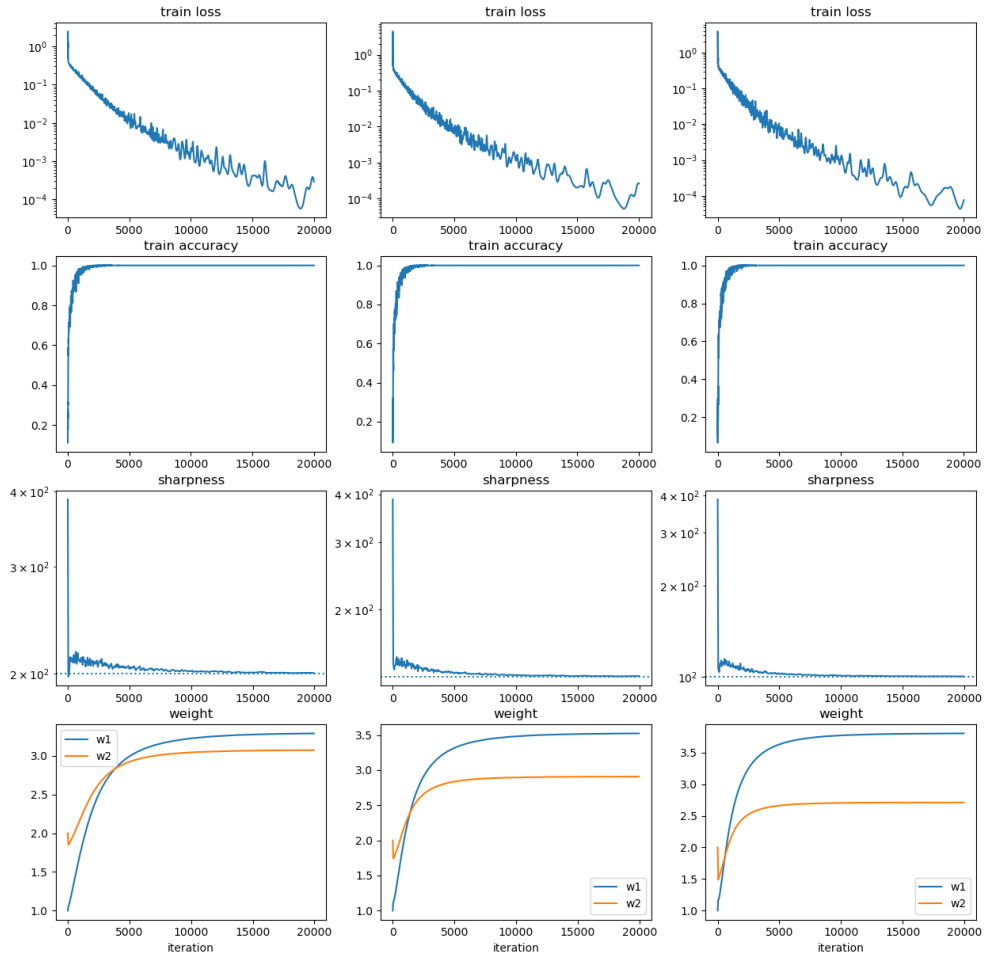
cifar10-1k/fc-relu-depth1/seed\_0/huber/gd/w1\_1\_w2\_10\_lr\_[0.02 0.03 0.04]

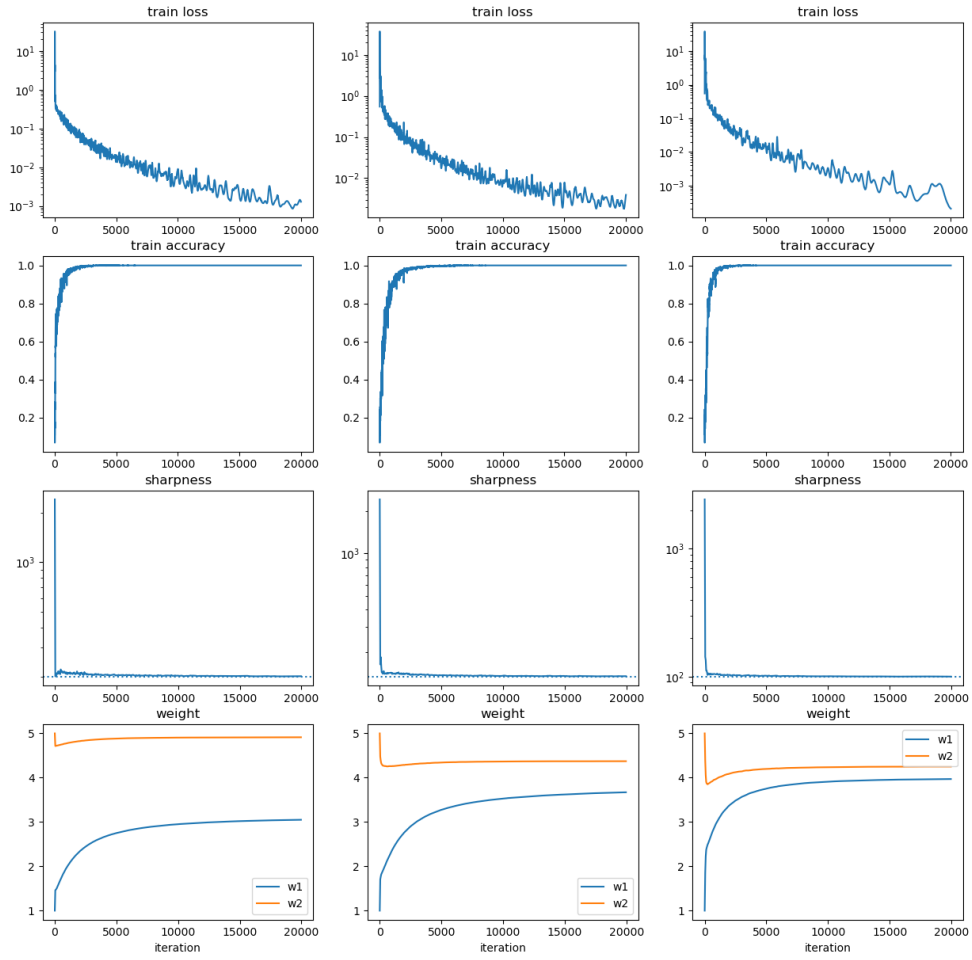


**Huber+Tanh**

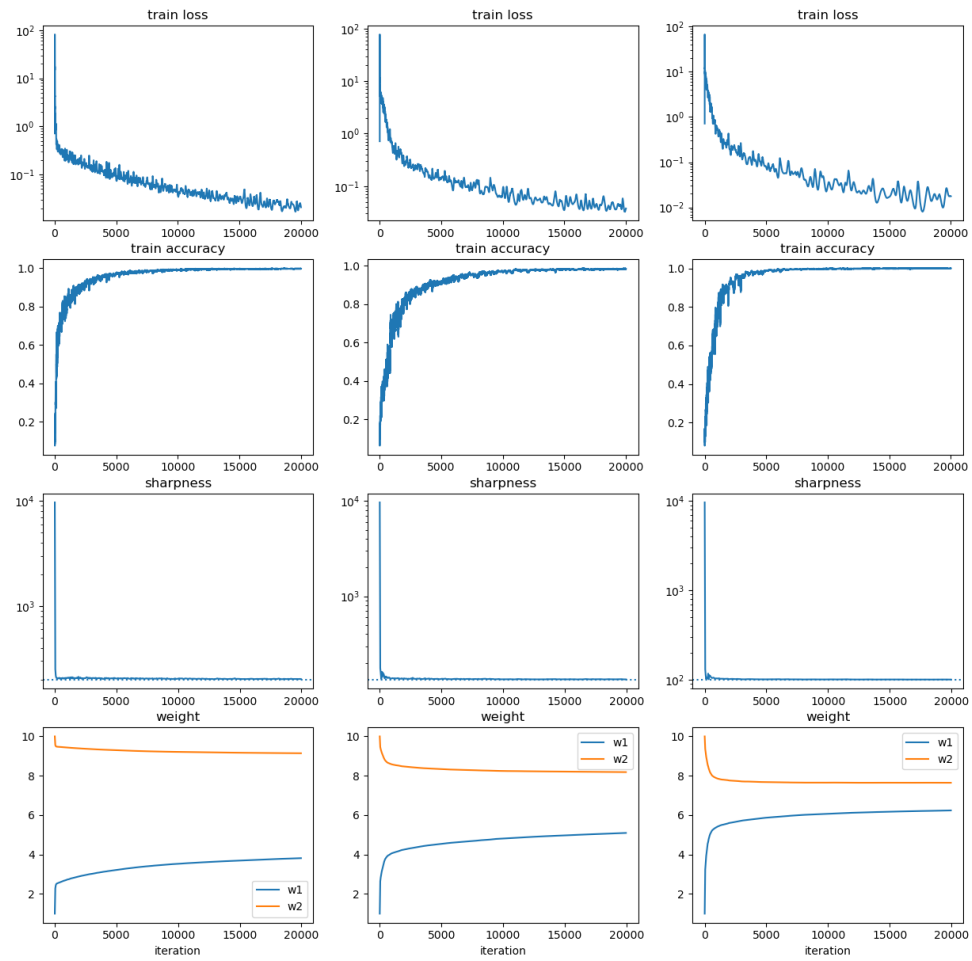


cifar10-1k/fc-tanh-depth1/seed\_0/huber/gd/w1\_1\_w2\_2\_lr\_[0.01 0.015 0.02 ]





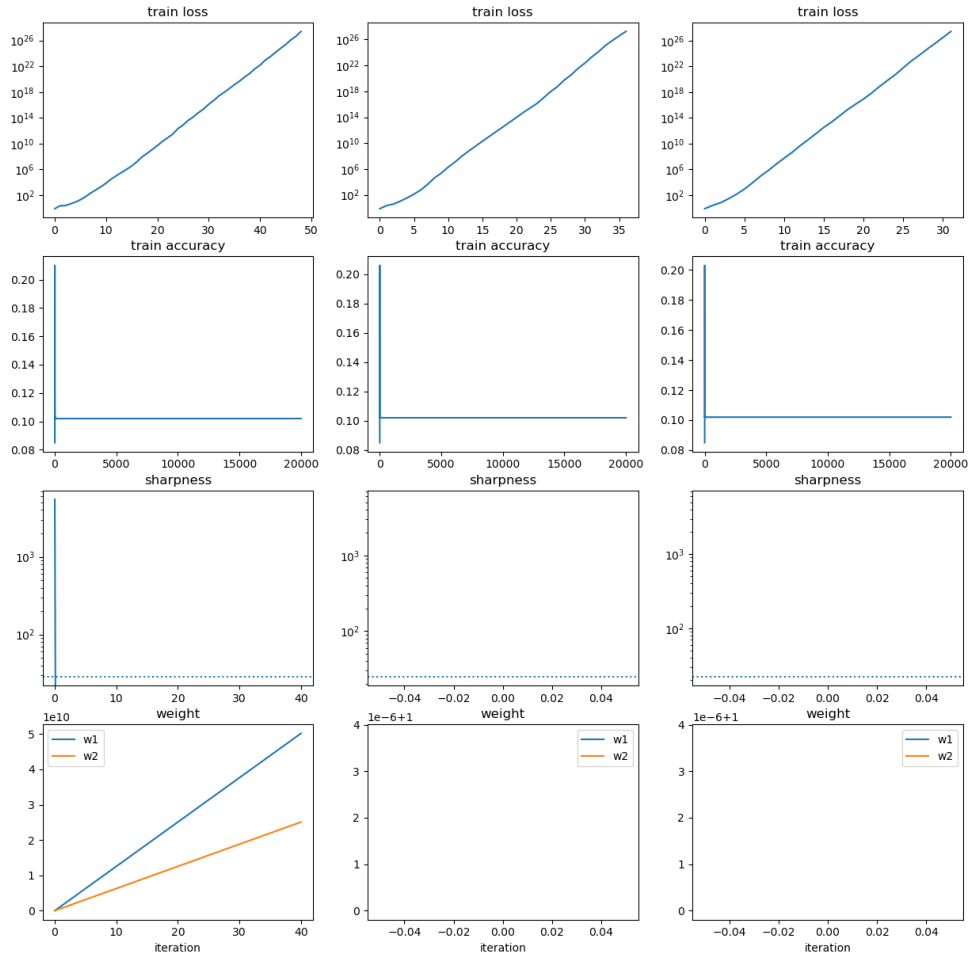
cifar10-1k/fc-tanh-depth1/seed\_0/huber/gd/w1\_1\_w2\_10\_lr\_[0.01 0.015 0.02 ]

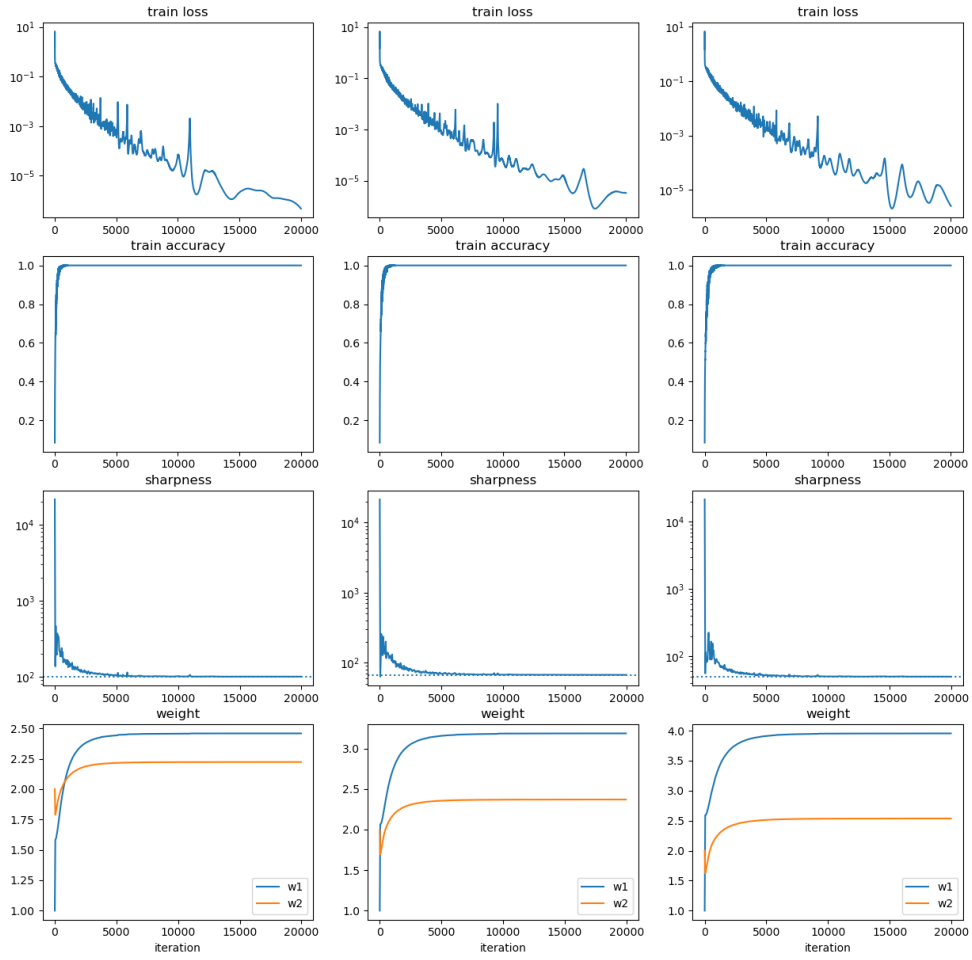


## MSE+ReLU+BN

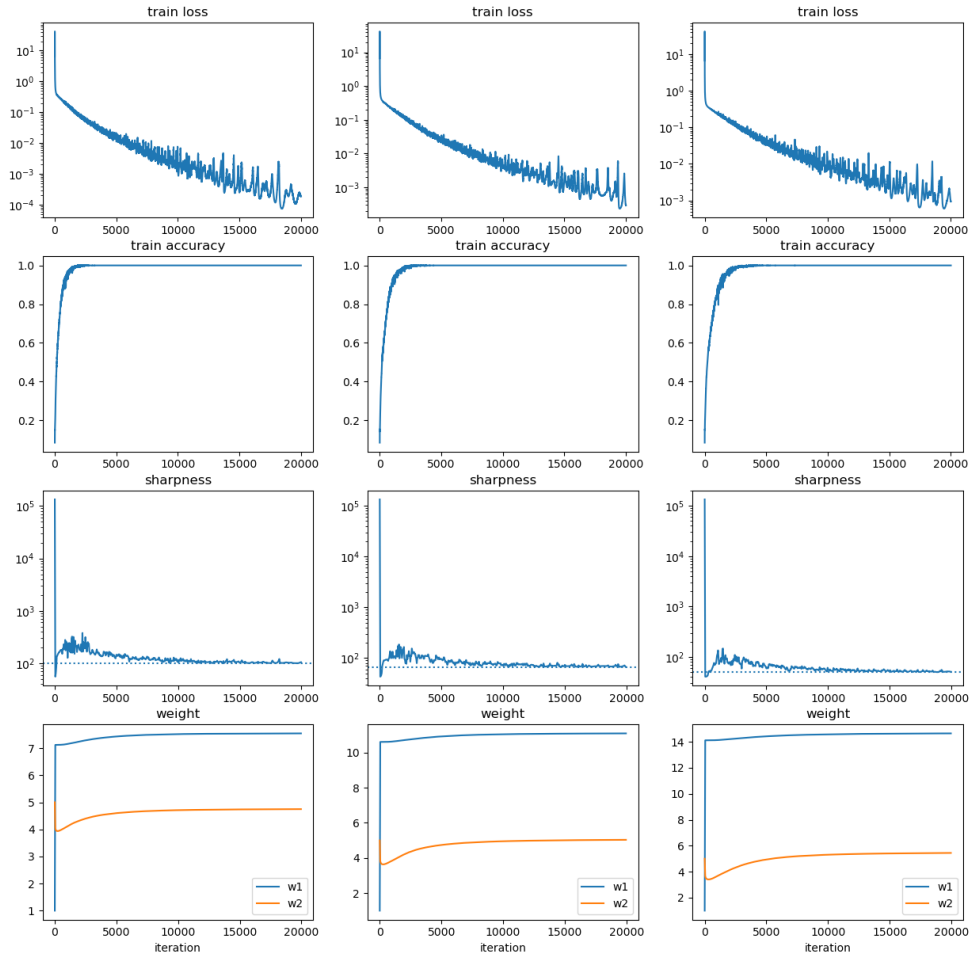
(smaller lr??):



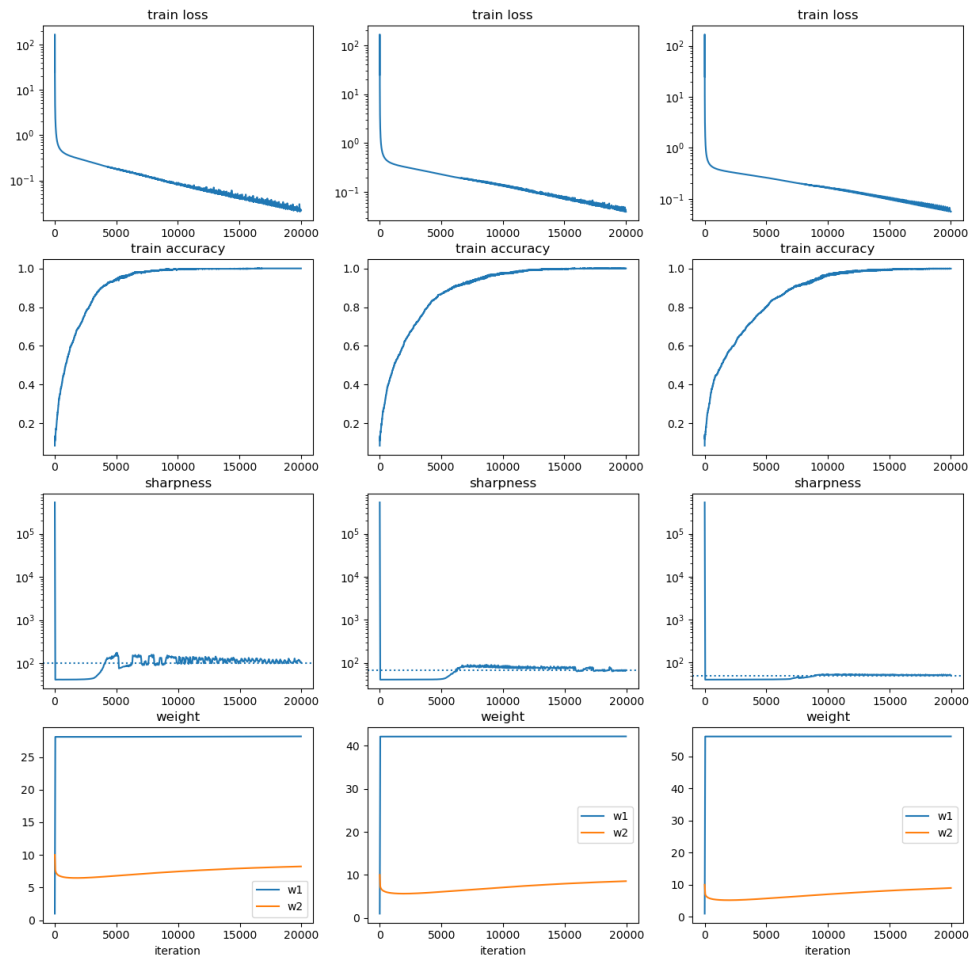




cifar10-1k/fc-relu-depth1\_BN/seed\_0/mse/gd/w1\_1\_w2\_5\_lr\_[0.02 0.03 0.04]



(under train):



- large lr rerun.
- norm difference square -> plot.
- dimension normalized weight.
- activation:  $\text{relu}^3$ .