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1. Describe the difference between WGAN\* and GAN\*\*, list at least two differences.

Ans:

1. In Discriminator, WGAN remove the last sigmoid layer comparing with GAN.

2. The losses of WGAN do not take the logarithm comparing with GAN.

3. Use RMSProp or SGD to be the optimizer of WGAN instead of using momentum or Adam.

2. Please plot the “Gradient norm” result.

a. Use training dataset, set the number of discriminator layer to 4 (minimum requirement)

b. Plot two setting:

i. weight clipping

ii. gradient penalty

c. Y-axis: gradient norm(log scale), X-axis: discriminator layer number (from low to high)



