IE 534 - Homework 6

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October 28, 2018

1 Implementation

My implementation done by copying the code in the tutorial, adding a few things to prevent numerical issues, and fixing the old python version stuff (xrange, etc). I also used the same random seed as presented in the tutorial.

In both cases, the 196-sized convolutional layer networks were used. The discriminator trained without the generator got 88 percent accuracy, and the discriminator trained with the generator got accuracy at 81 percent.

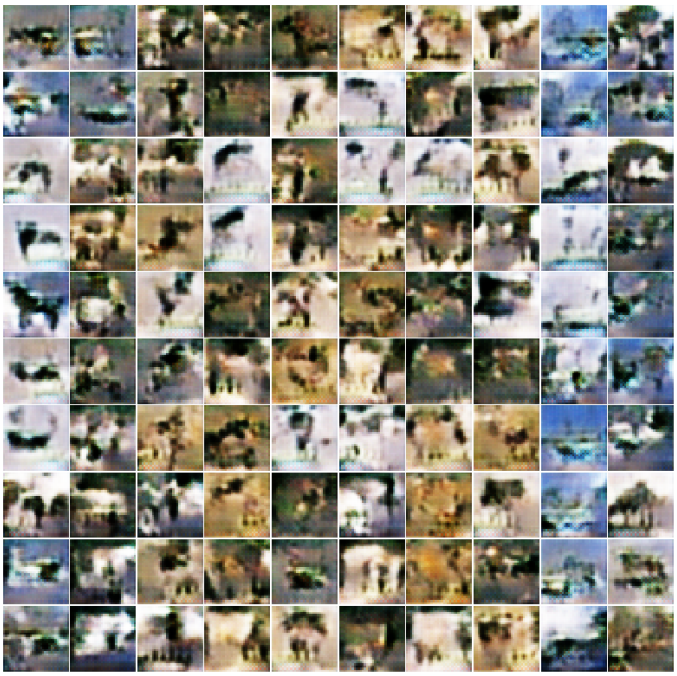

Figure 1: Generated Images at Epoch 0

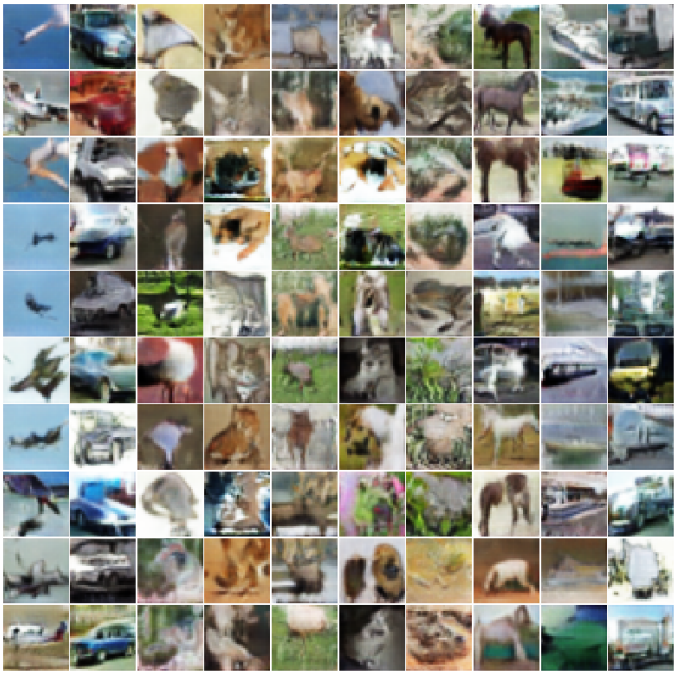

Figure 2: Generated Images at Epoch 50

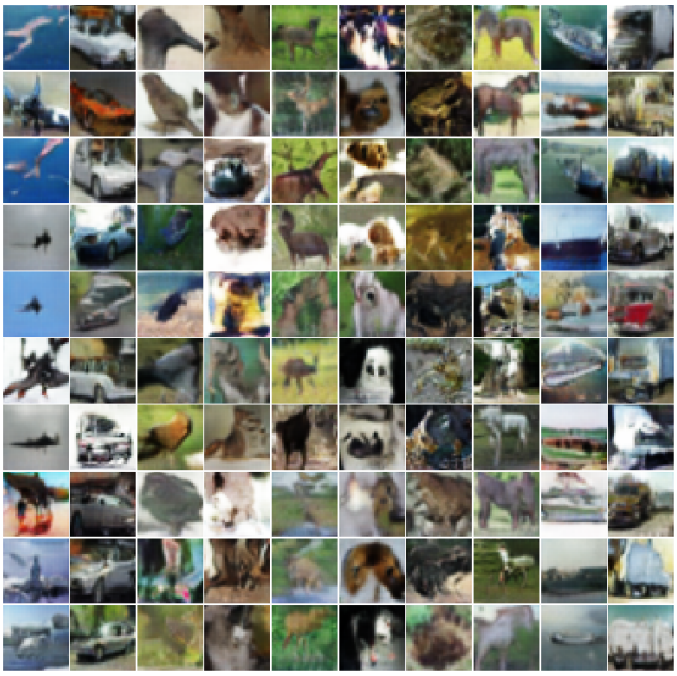

Figure 3: Generated Images at Epoch 100

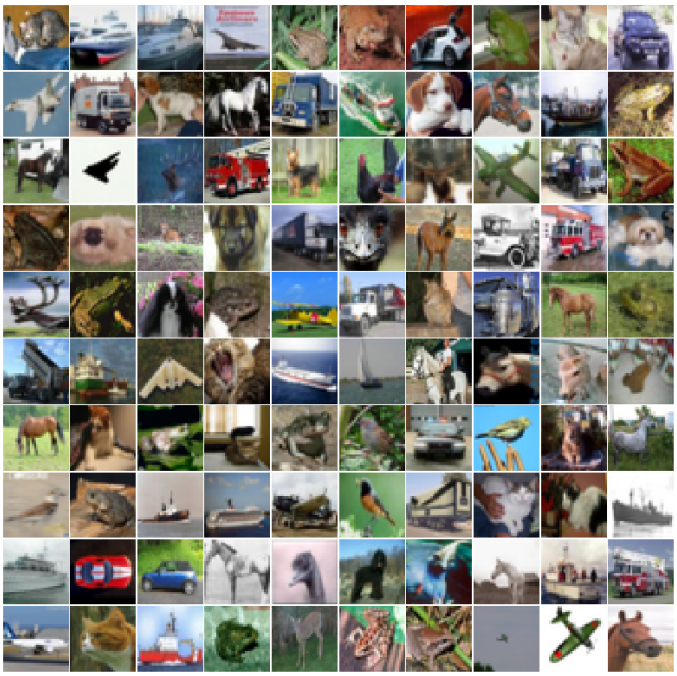

Figure 4: Real Images (trained with no generator)

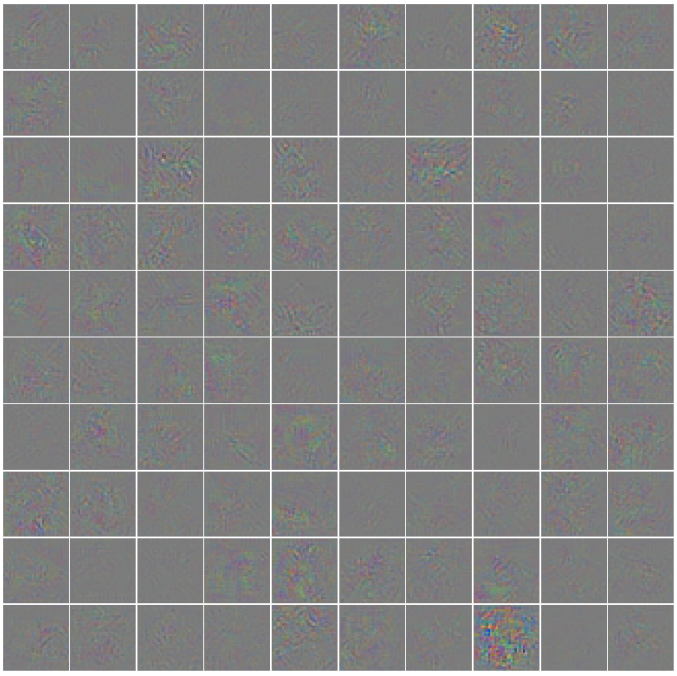

Figure 5: Gradient Image (trained with no generator)

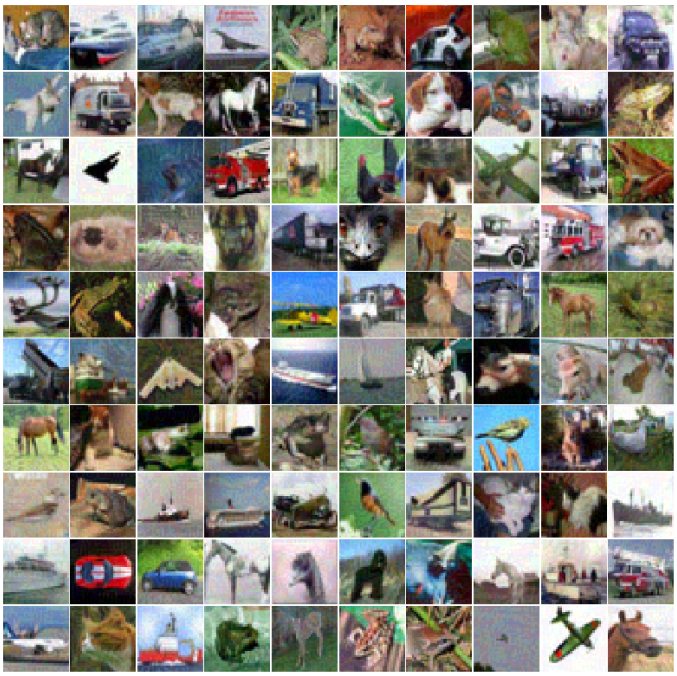

Figure 6: Jittered Image (trained with no generator)

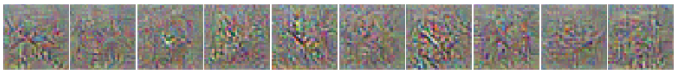

Figure 7: Max Class (trained with no generator)

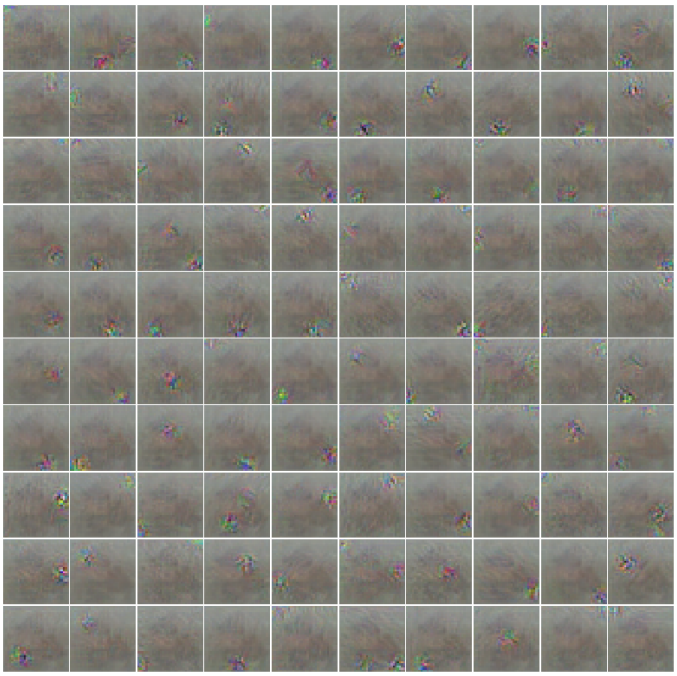

Figure 8: Max features at layer 4 (trained with no generator)

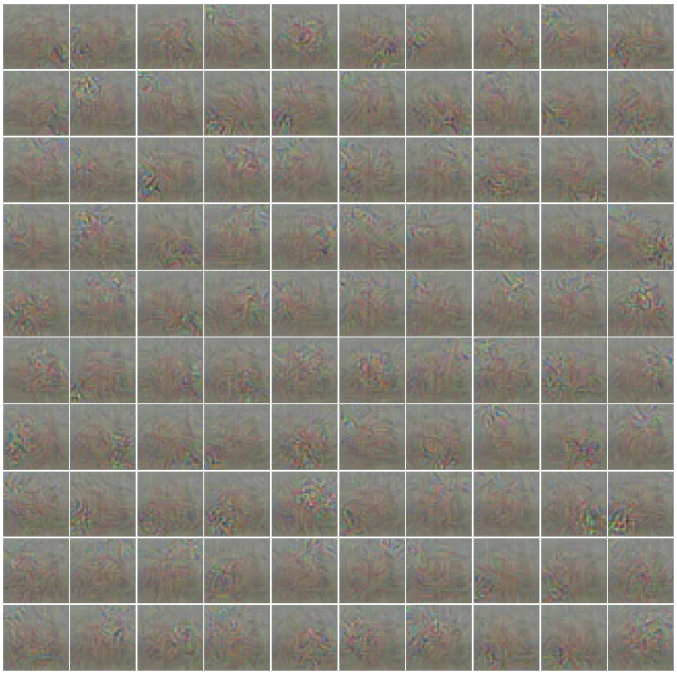

Figure 9: Max features at layer 6 (trained with no generator)

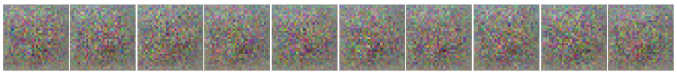

Figure 10: Max Class (trained with generator)

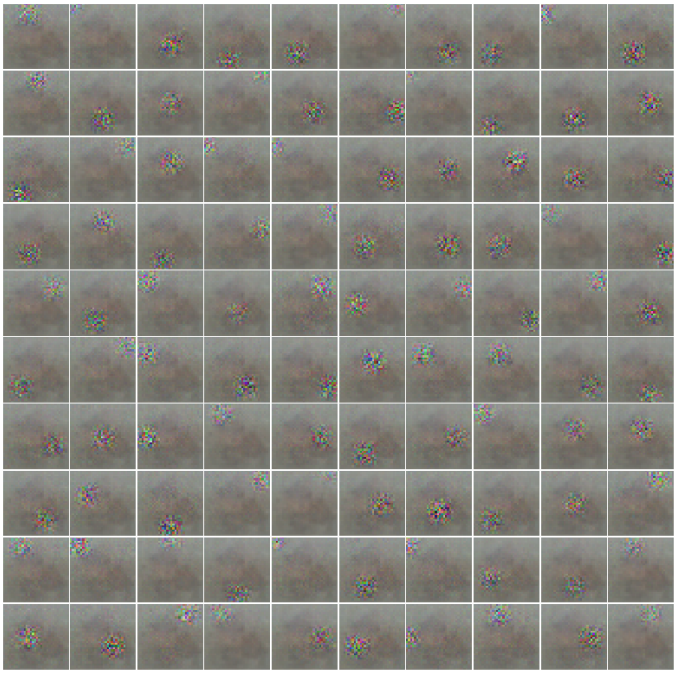

Figure 11: Max features at layer 4 (trained with generator)

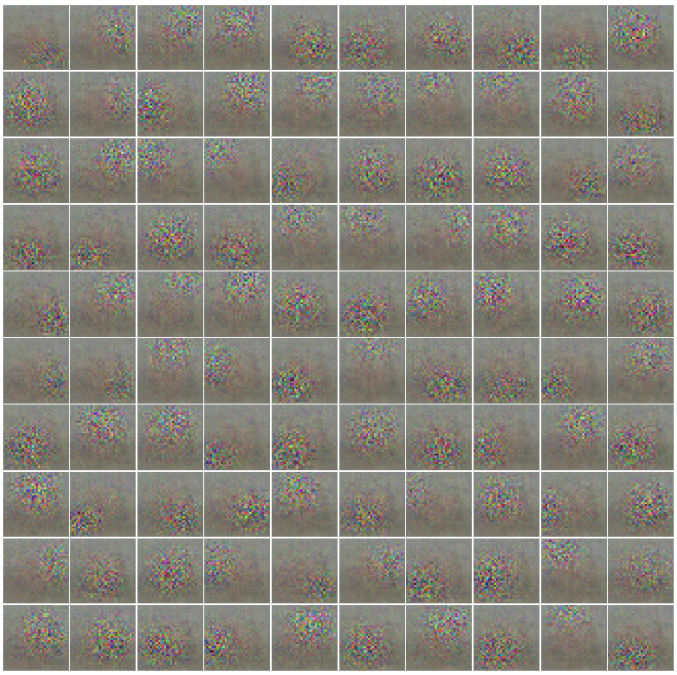

Figure 12: Max features at layer 6 (trained with generator)