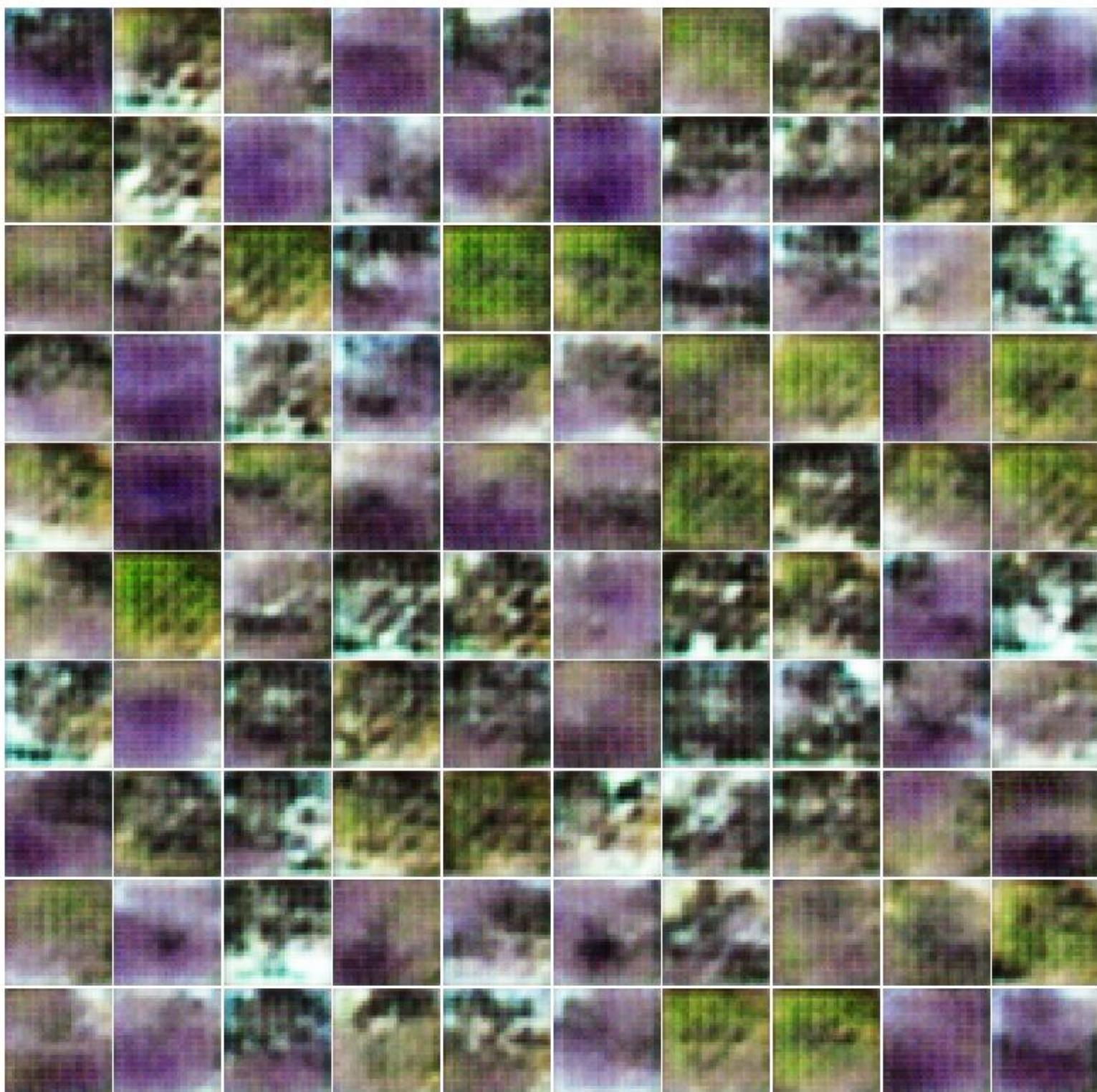Name: Junzhe Wu   NetID: junzhew3
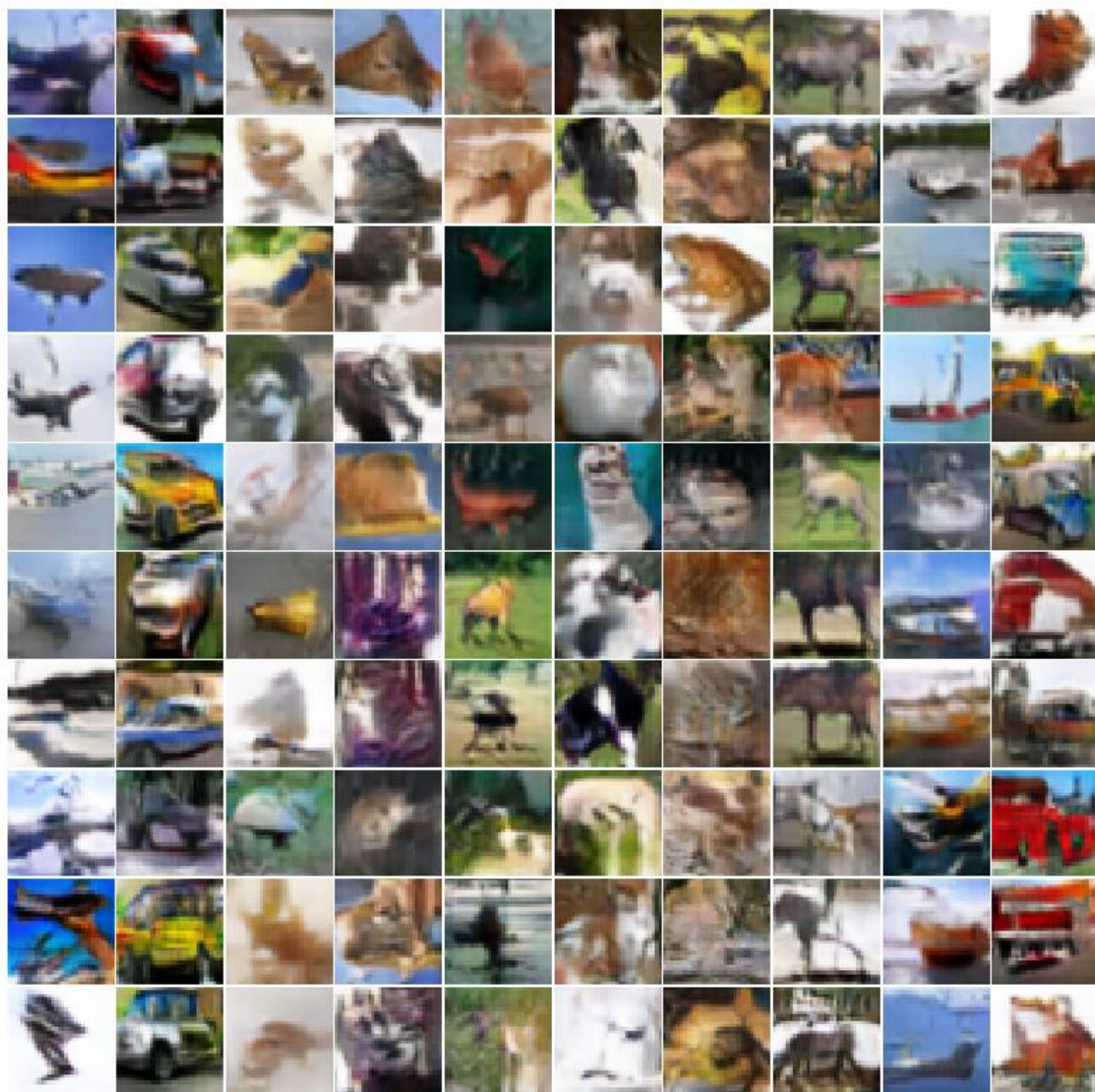
1. Part1
(1) Epoch 0
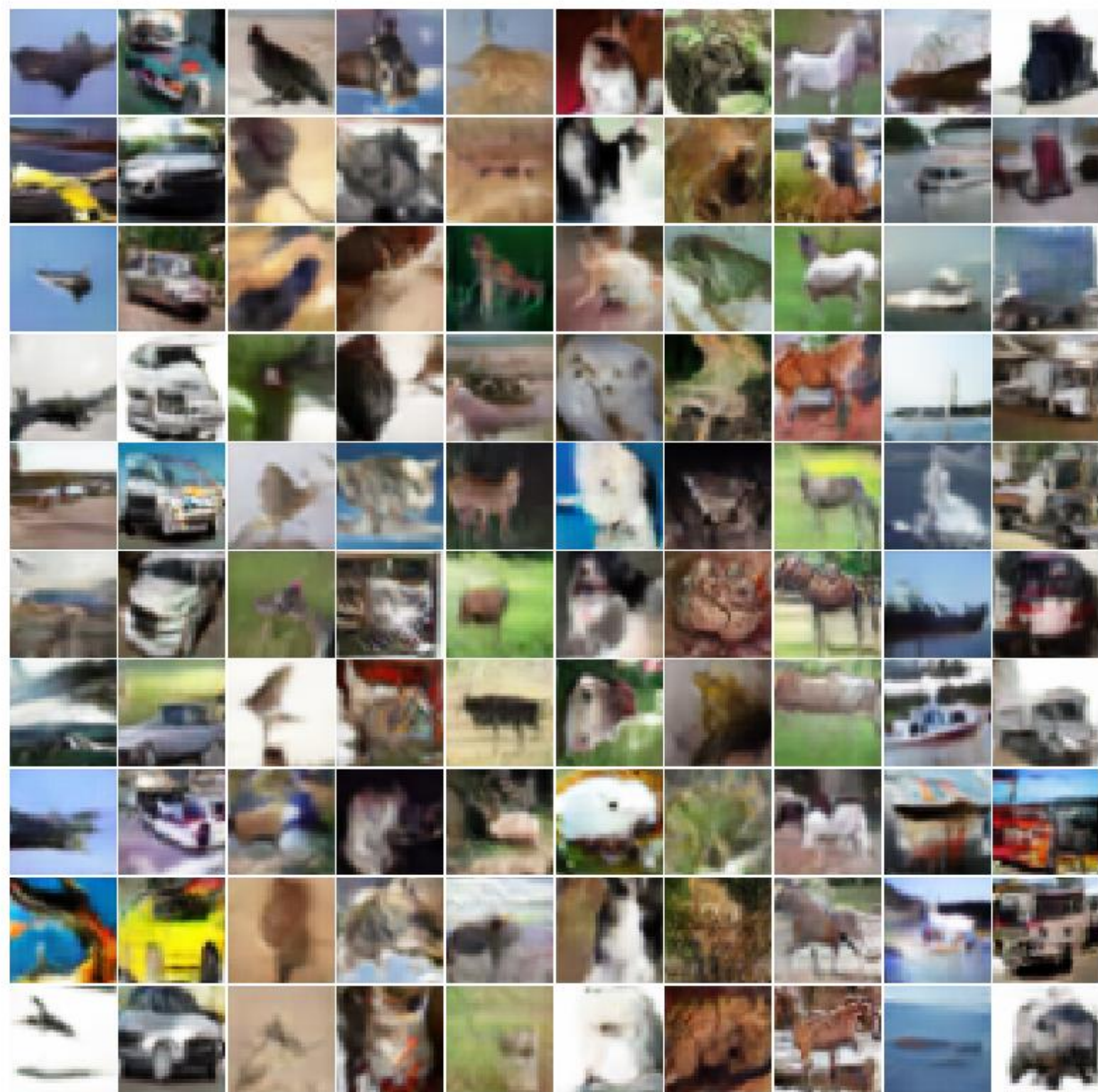
(2) Epoch 100
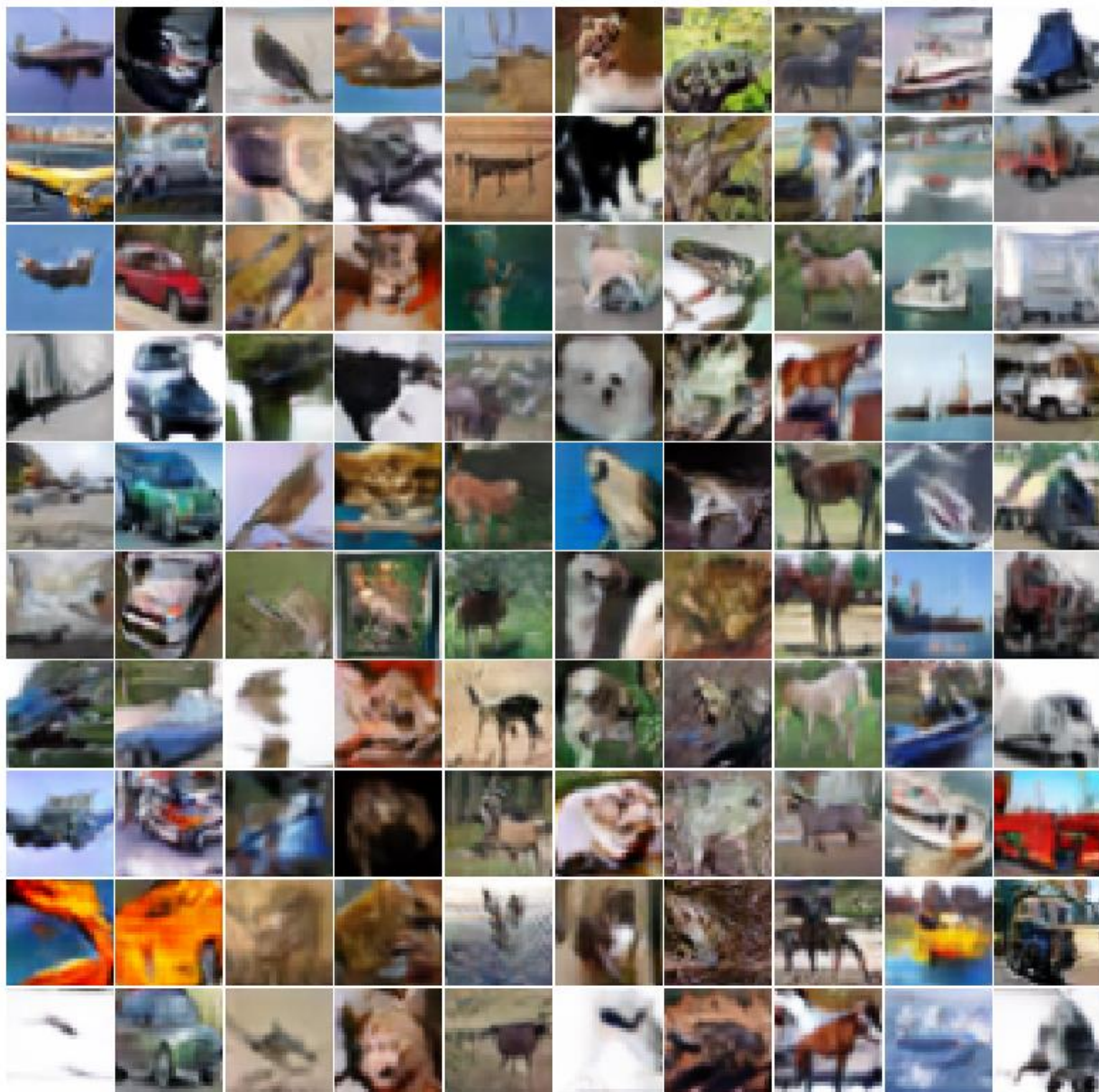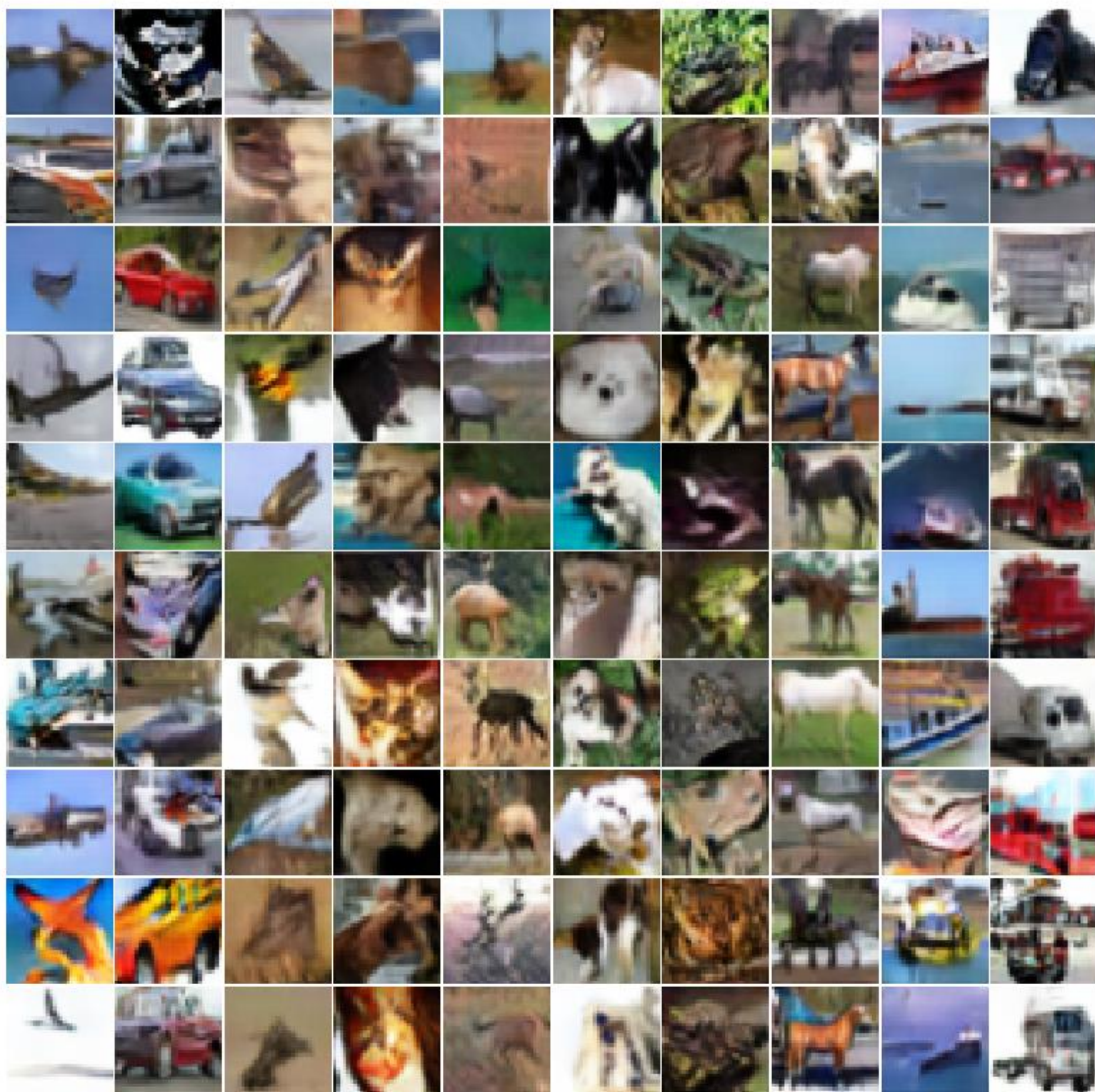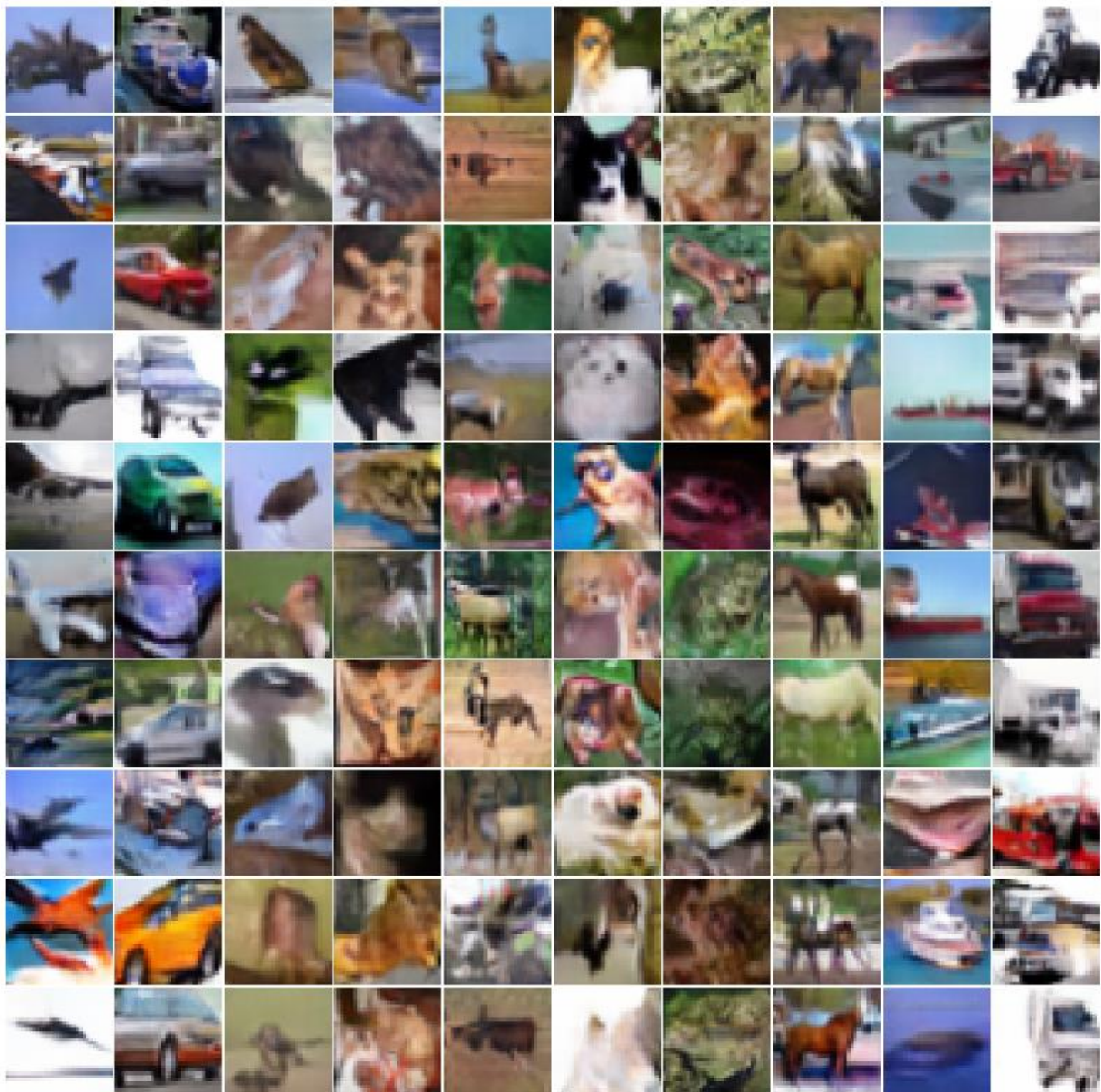
(3) Epoch 200

(4) Epoch 300

(5) Epoch 400

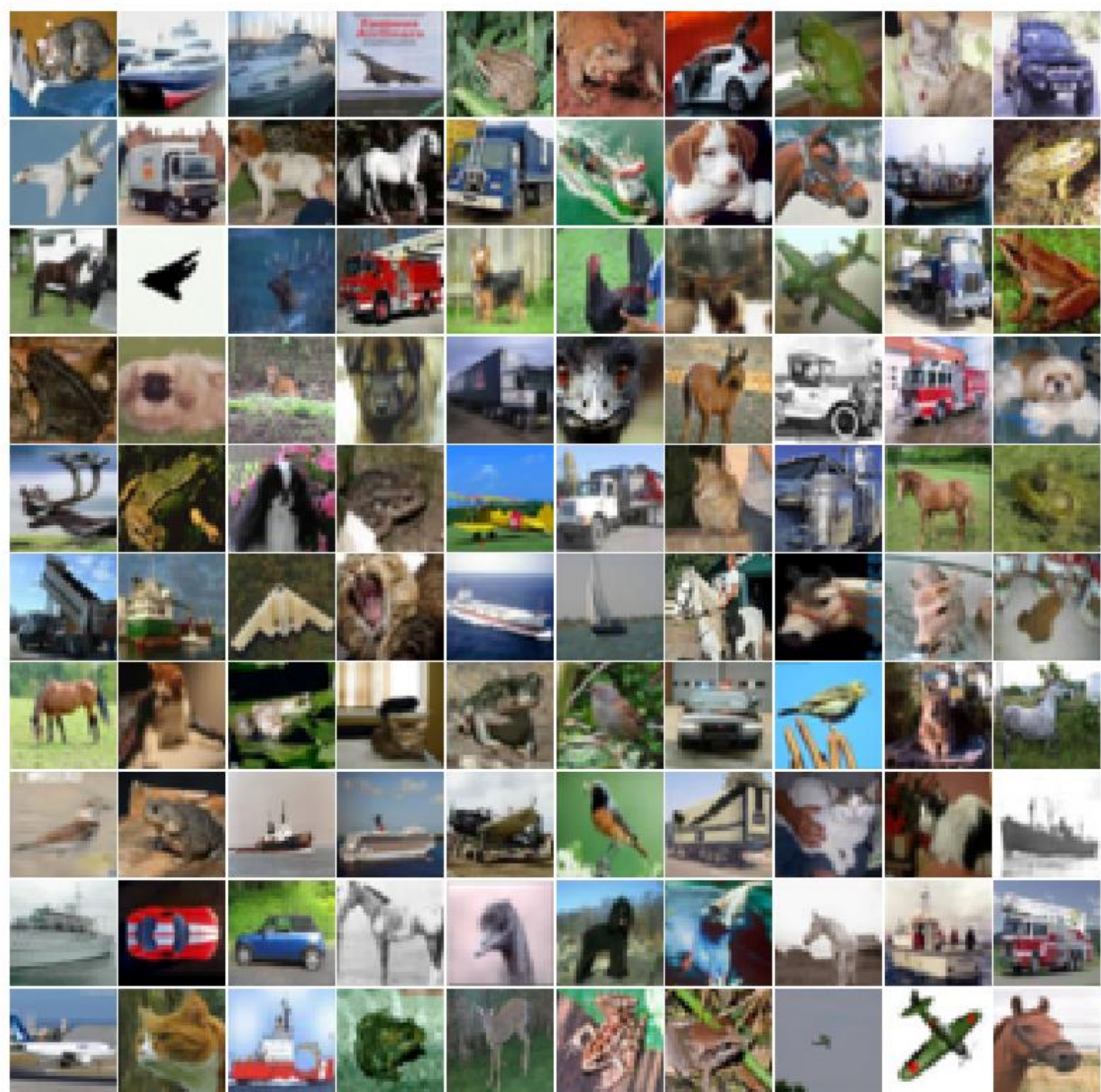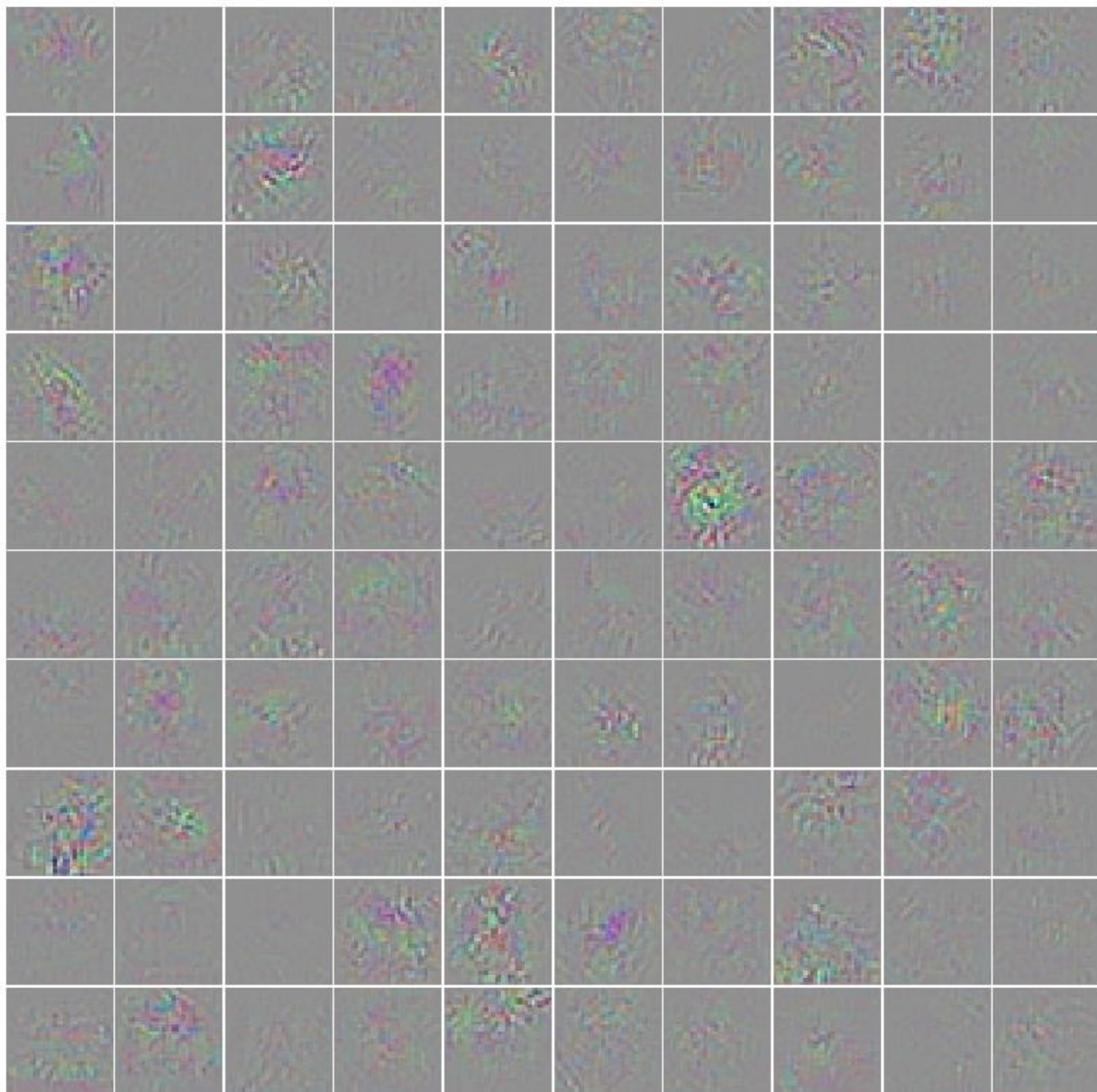(6) Epoch 500

2. Part 2.1
(1) Real images
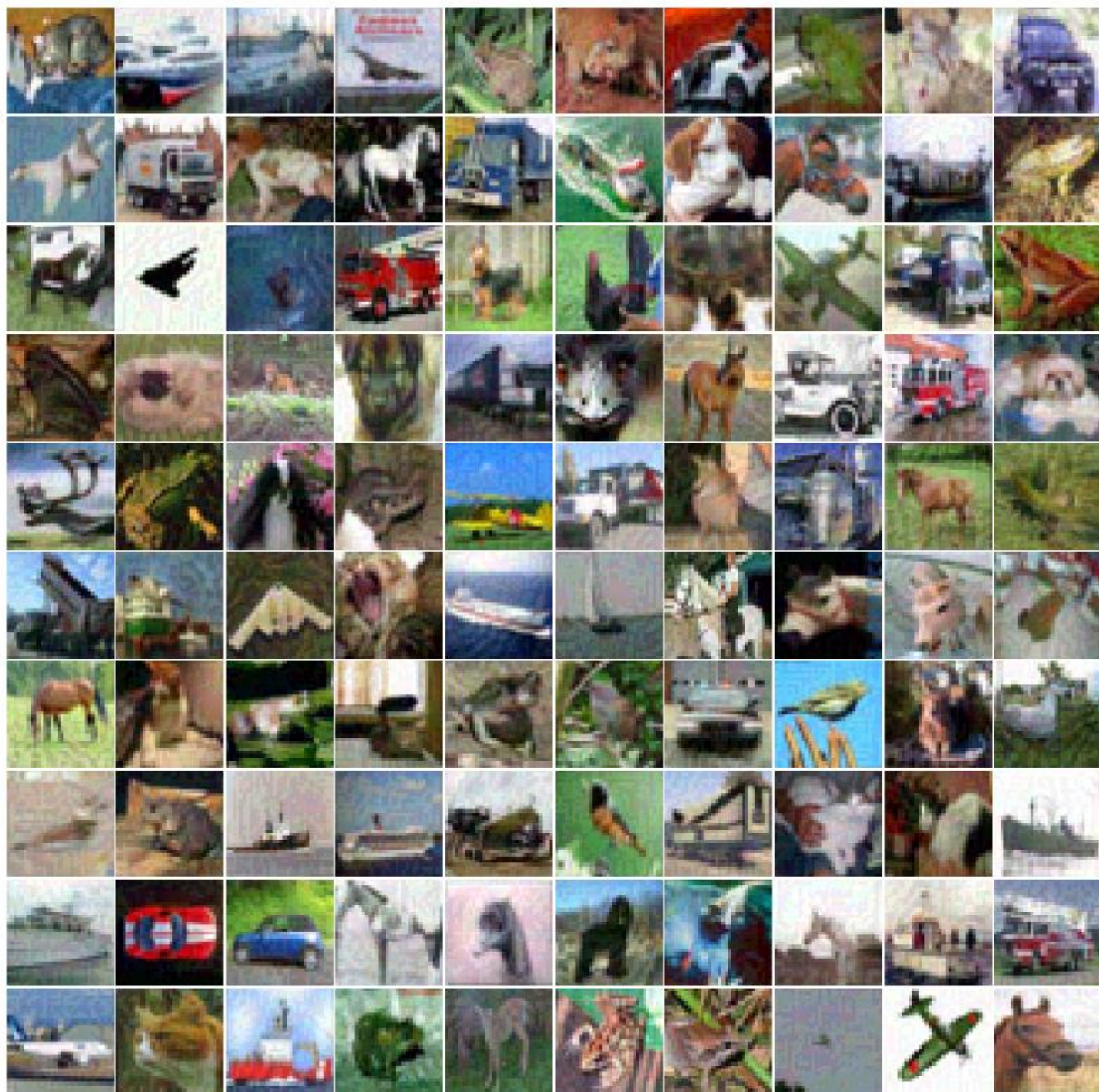
(2) Gradients images

(3) Modified images

3. Part 2.2

(1) The discriminator trained without the generator

(2) The discriminator trained with the generator
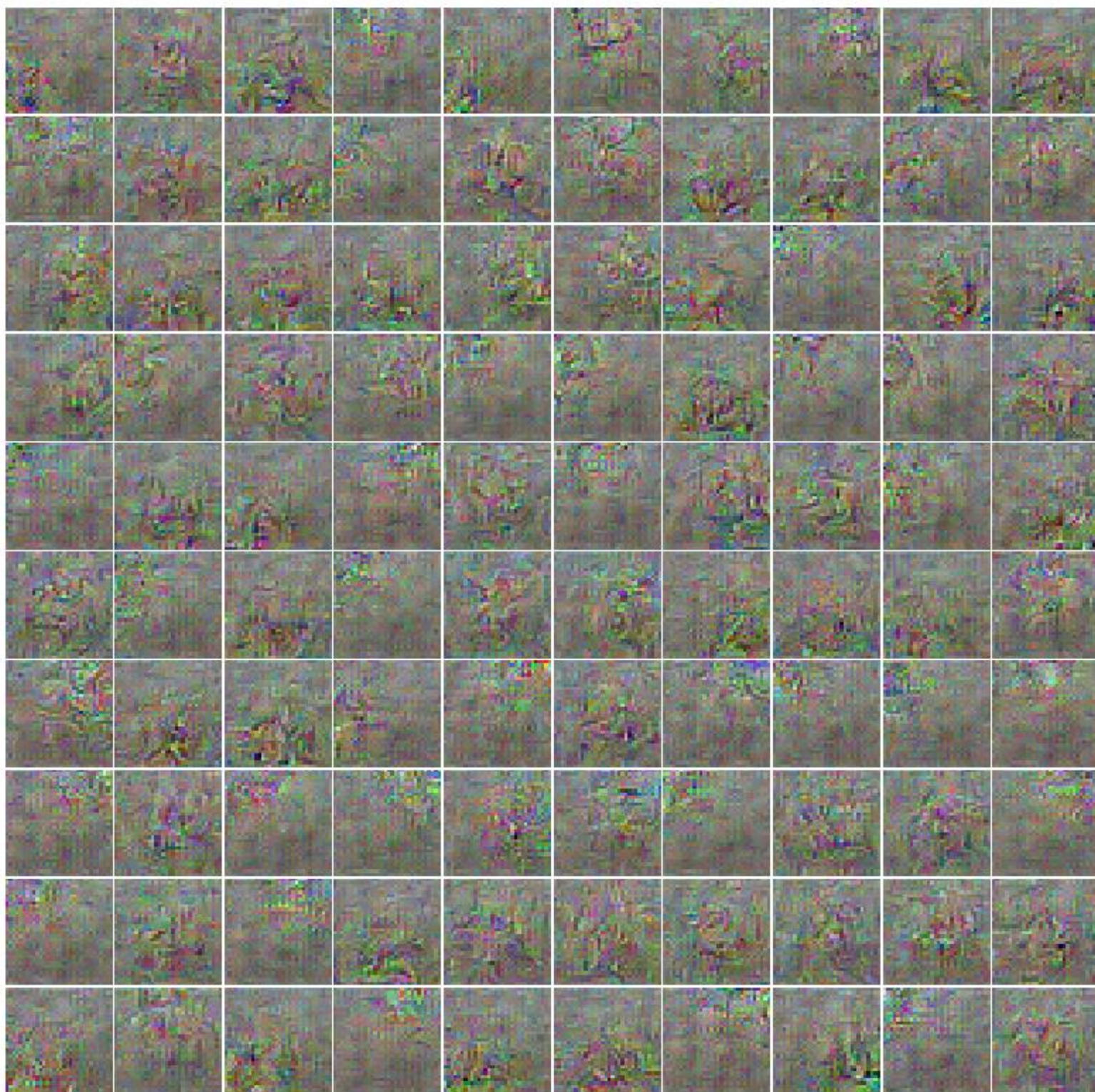

4. Part 2.3

(1) Synthetic images maximizing layer 4 features for discriminator trained without the generator

(2) Synthetic images maximizing layer 8 features for discriminator trained without the generator

(3)   Synthetic images maximizing layer 4 features for discriminator trained with the generator

(4) Synthetic images maximizing layer 8 features for discriminator trained with the generator

5. Test accuracy
(1) Discriminator trained without the generator
The test accuracy is 86.73% after 100 epoch.
(2) Discriminator trained with the generator
The test accuracy is 76.15% after 500 epoch. I use 128 features in both the generator and the discriminator.