

Title: How to generate more general image using Encoder and Decoder?

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Topic: Do we really need GAN to generate more general image? The problem with the auto encoder and decoder image generation is that it can only learn to replicate the images that it has seen before. Also, they are poor at recognizing images that have the same content but different pixel values. These problems sound very similar to what happens during overfitting. So, what if we train with the augmented data. Instead of doing pixel by pixel comparison with one original image, we can try to compare the generated image to the augmented images and determine that it is a good image if it is close to one of the augmented images. As if data augmentation has regulation effect, I am hoping it will do the same for the generated images.

Dataset: CIFAR-10

Time lines:

May 15: Start building architecture

May 20: Finish building and start training

May 22: Revise approaches or change architecture

May 25: Start training again and repeat the above process