Image Super-Resolution with GANs

Nathanael Bosch[1], Thomas Grassinger[1], Jonas Kipfstuhl[1], Pierre Springer[1]

[1]Technical University of Munich

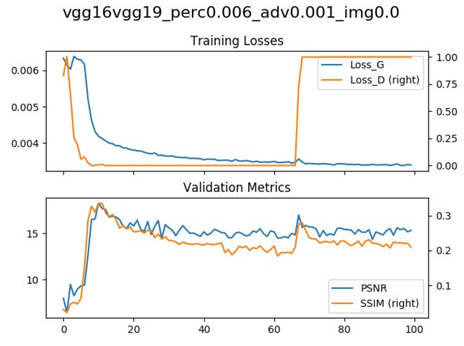
Introduction

Some sentences about the whole project

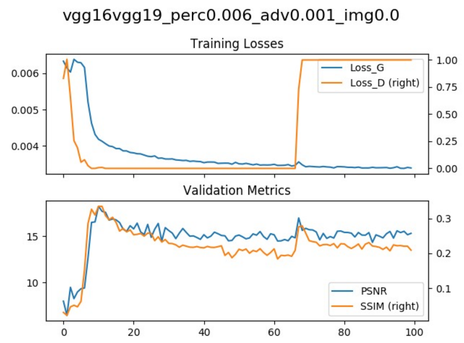
GANs

Maybe a picture to illustrate the idea of GANs.

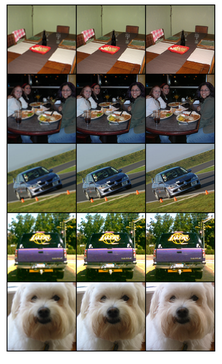
Statistics



Statistics2



Results



Results2

Main Results

- Networks learn even without discriminator
- Seemingly the training is faster with the use of a discriminator.
- Metrics do not change significantly after some training but the images get better
- In some settings the discriminator “dies” but images still improve
- Discriminator loss is extreme, either very low or very large; the transition is rapid
- Training the networks is tricky, discriminator “dies” often
- Visually the images change very much at beginning of training
- The visual perception of the images changes for a long training time. Details added at late stages make the images seem more like actual photographs.
- We could not see the large jumps for the discriminator that was shown in the paper.