
GAN Dissecting aGAN

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Abstract

We explore the GAN Dissection method and stuff.

1 Introduction

Much research in the field of Deep Learning has worked towards the goal of visualizing and understanding deep neural network architectures (cite much research). Introduce Network Dissection as a means of understanding semantic representation of Convolutional Neural Networks (cite net dissect).

The field of generative models is a-boomin', and from it many unique models have emerged, including (cite unique models). A dominant/popular model for image generation is the Generative Adversarial Network (cite GANs) and many GAN variants (cite GAN variants, or maybe don't, probably don't blow all our citations so early). All of this research/progress has spawned new research into understanding generative models. And maybe go into some research on generative models (with citations). Since the generative models use

cite spam to be copied: Bau et al. [2017] Bau et al. [2017] Bau et al. [2019] Bau et al. [2019] Karras et al. [2017] Karras et al. [2017] Karras et al. [2018] Karras et al. [2018] Goodfellow et al. [2014] Goodfellow et al. [2014] Nguyen et al. [2016] Nguyen et al. [2016] Yosinski et al. [2015] Yosinski et al. [2015]

2 GAN Dissection

Describe the method of GAN Dissection, results from their paper, and some of the questions they pose or questions that arise from their work

2.1 Applications

Talk about our hypotheses about their method, how we seek to apply it to study other GAN architectures and see if anything interesting happens, etc.

3 StyleGAN

Discuss the StyleGAN paper, architecture, their results and experiments, and why we think it would be a good candidate architecture for Dissection and what we might learn

4 Methods

Maybe discuss the GAN Dissection methods in brief

4.1 Progressive GANs

We first replicate (one of) the GAN Dissection experiments of the paper. Discuss details such as datasets used, ProGAN details, dissection details (layer, whatever other adjustable parameters the tool has), oh yeah mention that we use the tool provided at <http://github.com/CSAILVision/GANDissect> to do the heavy lifting.

4.2 StyleGAN

Same stuff

5 Results

More to come.

6 Analysis

More to come.

7 Discussion

More to come.

Acknowledgments

References

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