Presentation on "Unsupervised Representation Learning with Deep Convolutional Generative Adversarial Networks," by Alec Radford, Luke Metz, and Soumith Chintala

John Hancock

Florida Atlantic University

jhancoc4@fau.edu

November 11, 2018

Overview

Definitions

What is the paper about

How did they do it?

Background

A generative adversarial network is A deep convolutional generative adversarial network is

What the paper is about

The authors of the paper make several contributions they...

- invent the deep convolutional generative adversarial network (DCGAN),
- apply the components of a DCGAN to a classification problem,
- demonstrate that after training the DCGAN, its filters learn how to represent images, and
- present a method of doing arithmetic using DCGAN filters to do inferences à la Word2Vec [3].

How did they do it?

The authors of the paper make several contributions: Here reference github code implementation

References



S. Chintala, L. Metz, and A. Radford, Unsupervised representation learning with deep convolutional generative adversarial networks. 2016. [Online]. Available: arXiv:1511.06434v2 [cs.LG]



Y. Bengio, A. Courville, I. Goodfellow, M. Mirza, S. Ozair, J. Pouget-Abadie, D. Warde-Farley, B. Xu, Generative adversarial nets. 2014. [Online]. Available: arXiv:1406.2661v1 [stat.ML]



T. Mikolov, I. Sutskever, K. Chen, G. Corrado, J. Dean, "Distributed Representations of Words and Phrases and their Compositionality," Advances in Neural Information Processing Systems 26 (NIPS 2013), 2013. [Online] Available: http://papers.nips.cc/paper/ 5021-distributed-representations-of-words-and-phrases-and-their-co pdf



Creodocs Limited, "Beamer Presentation," latextemplates.com, 2018. [Online], Available: http://www.latextemplates.com/templates/ presentations/1/presentation_1.zip. [Accessed Nov. 10, 2018].



IEEE, Piscataway, NJ, USA. IEEE Editorial Style Manual. 2016. [Online]. Available: http://ieeeauthorcenter.ieee.org/wp-content/uploads/ IEEE_Style_Manual.pdf, Accessed on: Nov. 11, 2018. 4□ > 4個 > 4 = > 4 = > = 990

The End