Style Transfer Into Anime With GANs

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Related papers:

Chen, Yang, Yu-Kun Lai, and Yong-Jin Liu. "**Cartoongan: Generative adversarial networks for photo cartoonization**." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pp. 9465-9474. 2018.
http://openaccess.thecvf.com/content_cvpr_2018/papers/Chen_CartoonGAN_Generative_Adversarial_CVPR_2018_paper.pdf

Li, Jerry. "**Twin-GAN--Unpaired Cross-Domain Image Translation with Weight-Sharing GANs.**" *arXiv preprint arXiv:1809.00946* (2018).
https://arxiv.org/pdf/1809.00946.pdf

Optional readings:

He, Kaiming, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. "**Deep residual learning for image recognition**." In *Proceedings of the IEEE conference on computer vision and pattern recognition*, pp. 770-778. 2016.
http://openaccess.thecvf.com/content_cvpr_2016/papers/He_Deep_Residual_Learning_CVPR_2016_paper.pdf

Zhu, Jun-Yan, Taesung Park, Phillip Isola, and Alexei A. Efros. "**Unpaired image-to-image translation using cycle-consistent adversarial networks.**" In *Proceedings of the IEEE International Conference on Computer Vision*, pp. 2223-2232. 2017.
http://openaccess.thecvf.com/content_ICCV_2017/papers/Zhu_Unpaired_Image-To-Image_Translation_ICCV_2017_paper.pdf

Questions and Discussion:

What is/are the common limitation(s) between CartoonGAN and other methods that fall into the style transfer category?

The Twin-GAN paper claims cross-domain applicability exemplified by translation of human faces into cat faces. What do you make of it?

Pick a research question if you're forced to remain within this domain.

Anime, like cartoon and caricature, create a sense of style by exaggerating some features while ignoring others. What characteristic of a human artist allows them to do it so successfully compared to machine learning?

What is the difference between Neural Style Transfer and GAN?

Differences between TwinGAN with the other style transfer GAN?