NEURAL BAUHAUS STYLE TRANSFER

Project Plan

KW*	Start	Topic	Description
42	14.10.	Project Fair	
43	21.10.	Kick-off, ANN-Theory	Udacity lessons 1 & 2.
44	28.10.	Pytorch Intro	Udacity lesson 4. Lessen 3 is optional.
45	04.11.	Git Intro, Concept for Data Acquisition	Complete the course about git [2]. Conceptualize which data to acquire how.
46	11.11.	Conv Nets Intro	Udacity lesson 5.
47	18.11.	Reading	Read the GAN [3] and the CycleGAN [4] papers.
48	25.11.	CycleGAN Exercise	Carefully complete exercise [9].
49	02.12.	Explore Official CycleGAN	Delve into [5] and [6] and train and run it on the Van Gogh images. Explore it with your already available Bauhaus data.
50	09.12.	Data Acquisition	Acquire the data according to your concept from KW 45.
51	16.12.	Bauhaus Museum	Appointment for 17.12. from 13-17 Uhr. Inspect, assess, and prepare the acquired images.
52	23.12.	Holiday	
		2020	
1	30.12.	Holiday	
2	06.01.	Bauhaus CycleGAN	Apply CycleGAN for Bauhaus style transfer
3	13.01.	Improve Bauhaus CycleGAN	Further improve the results

To be completed...

* Kalenderwoche (*calendar week*)

Primary Resources

[1] Pytorch Course: `https://www.udacity.com/course/deep-learning-pytorch--ud188`

[2] Git Tutorial: `https://www.udacity.com/course/version-control-with-git--ud123`

[3] GAN Paper: Goodfellow, Ian, et al. "Generative adversarial nets." *Advances in neural information processing systems*. 2014.

[4] CycleGAN Paper: Zhu, Jun-Yan, et al. "Unpaired image-to-image translation using cycle-consistent adversarial networks." *Proceedings of the IEEE international conference on computer vision*. 2017.

[5] CycleGAN Repository: `https://github.com/junyanz/CycleGAN`

[6] CycleGAN Project Page: `https://junyanz.github.io/CycleGAN/`

[7] Toronto Exercises: `http://www.cs.toronto.edu/~rgrosse/courses/csc321_2018/assignments/a4-handout.pdf`

[8] Toronto Code: `www.cs.toronto.edu/~rgrosse/courses/csc321_2018/assignments/a4-code.zip`

[9] CycleGAN Exercise: `https://github.com/udacity/deep-learning-v2-pytorch/tree/master/cycle-gan`

Secondary Resources

[9] Deep Learning Bible: Goodfellow, Ian, Yoshua Bengio, and Aaron Courville. "Deep learning." *MIT press*. 2016.

[10] Deep Learning Overview Article: LeCun, Yann, Yoshua Bengio, and Geoffrey Hinton. "Deep learning." *nature 521.7553*. 2015: 436.