



Week 6

- Week to do list
 - ☒ run the code of GAN+CMA-ES
 - ☑ new ideas
 - ☑ read more GAME related papers
 - ☑ read few papers from Lin

This week I mainly implement GAN and CMA-ES these two algorithms. Although the code is open, I still find it difficult to use. Then I read some papers, one is about GAN and the other is about Multi-Task Learning.

Actually, I have open a repository to document my paper progress. You can see the [link](#).

Game

[1] "Searching the Latent Space of a Generative Adversarial Network to Generate DOOM Levels"

Also used CMA-ES + GAN, but just migrated to ZOOM.

[2] "Generative Image Modeling using Style and Structure Adversarial Networks"

The first one who use CMA-ES to solve GAN.

MTL

Pareto Multi-Task Learning

[3] "Deep network interpolation for continuous imagery effect transition"

Main idea: User flavors motivates the possibility of continuous transition among different output effects. Using a method named Deep Network Interpolation.

References

- [1] Edoardo Giacomello, Pier Luca Lanzi, and Daniele Loiacono. Searching the latent space of a generative adversarial network to generate doom levels. In *2019 IEEE Conference on Games (CoG)*, pages 1–8. IEEE, 2019.
- [2] Xiaolong Wang and Abhinav Gupta. Generative image modeling using style and structure adversarial networks. In *European Conference on Computer Vision*, pages 318–335. Springer, 2016.
- [3] Xintao Wang, Ke Yu, Chao Dong, Xiaoou Tang, and Chen Change Loy. Deep network interpolation for continuous imagery effect transition. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 1692–1701, 2019.