

Ensemble of GAN

Observation

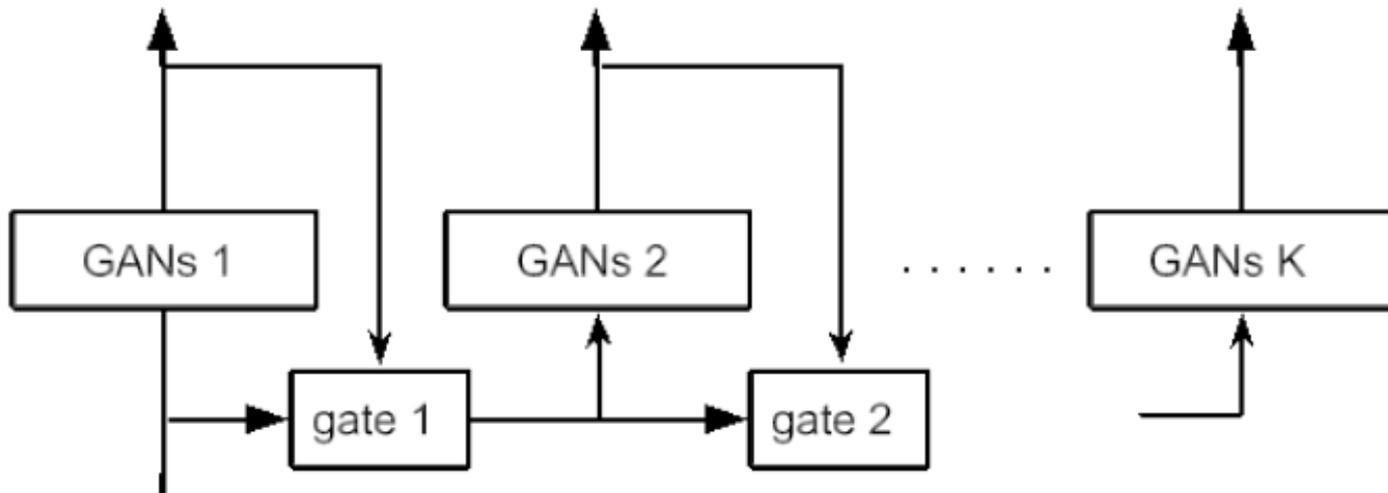
陳柏文同學提供
實驗結果

Yaxing Wang, Lichao Zhang, Joost van de Weijer, "Ensembles of Generative Adversarial Networks", NIPS workshop, 2016



Ensemble of GAN

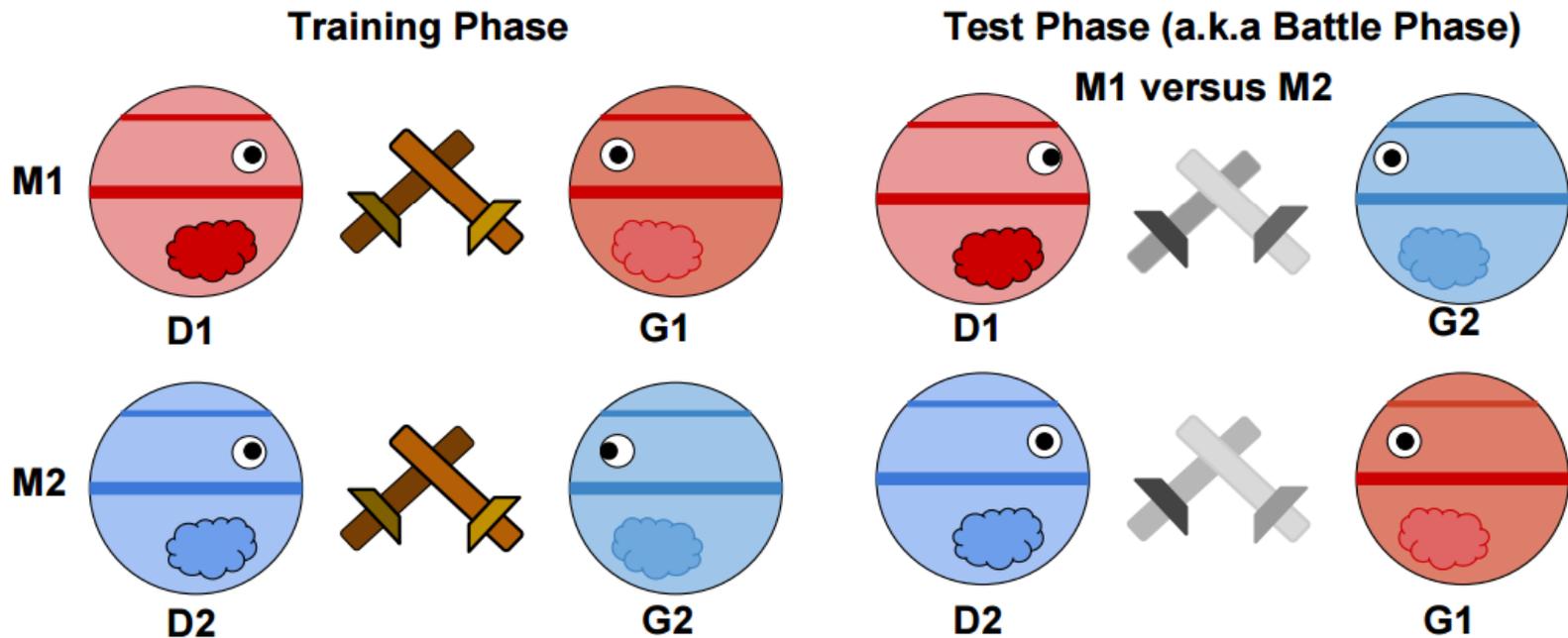
- Standard ensemble of GAN
- Self-ensemble of GAN
- Cascade of GAN



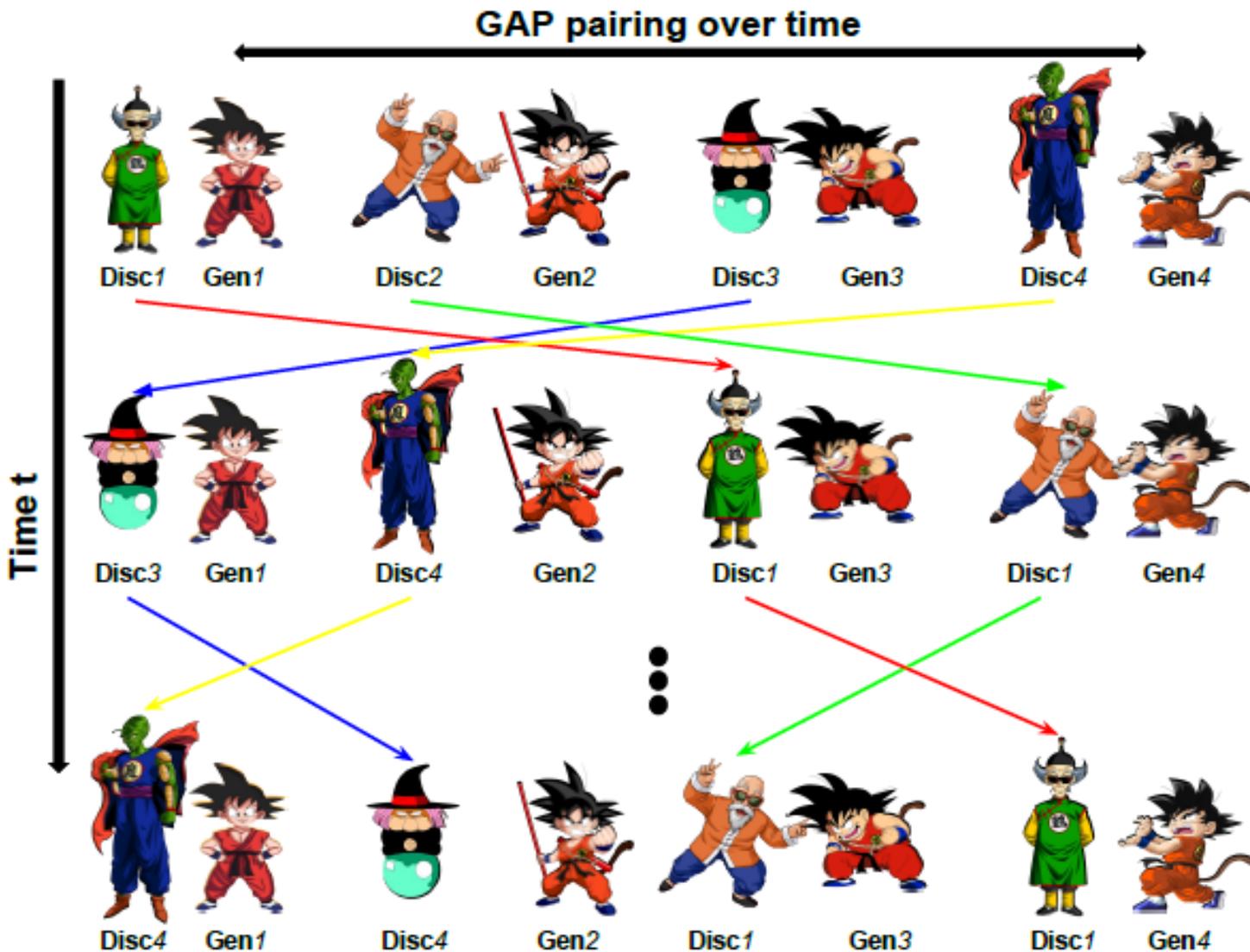
Generative Adversarial Parallelization

<https://arxiv.org/pdf/1602.05110.pdf>

- Idea from previous work: using a discriminator to evaluate the generator

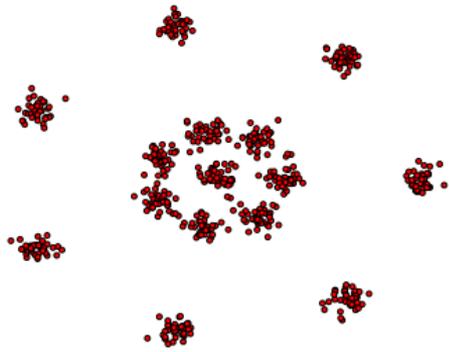


Generative Adversarial Parallelization

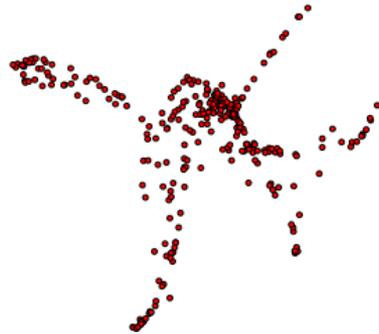


This figure is from the original paper: <https://arxiv.org/abs/1612.04021>

Generative Adversarial Parallelization



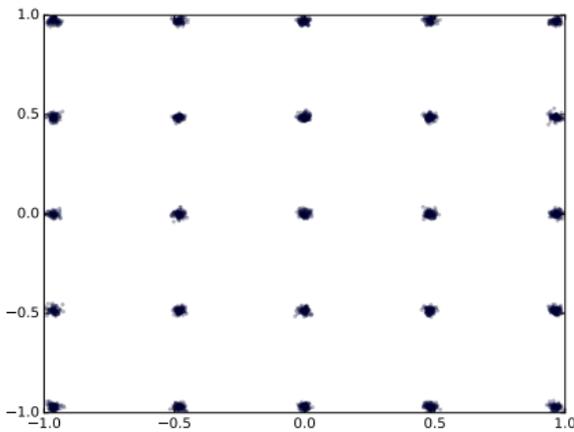
(a) R15 Dataset



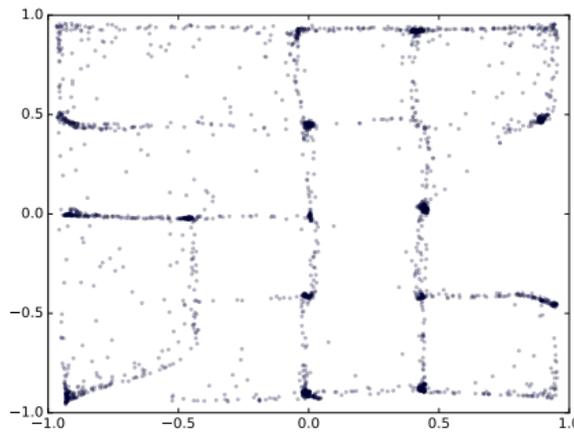
(b) GAN



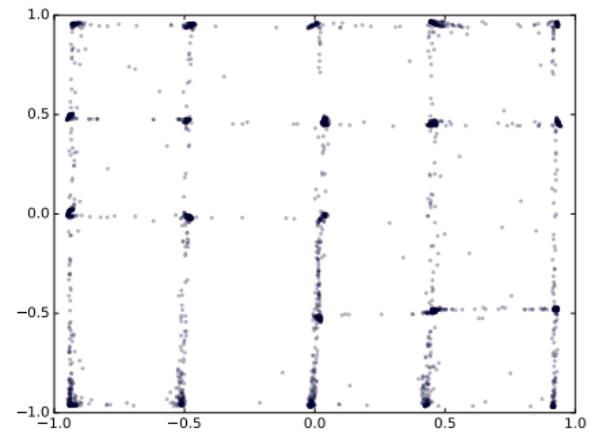
(c) GAP_{GAN4}



(d) Mixture of Gaussian



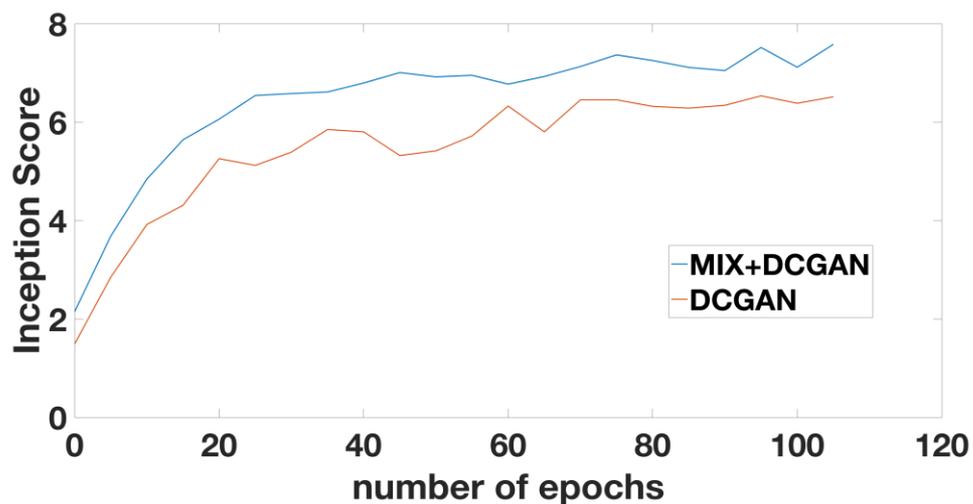
(e) GAN



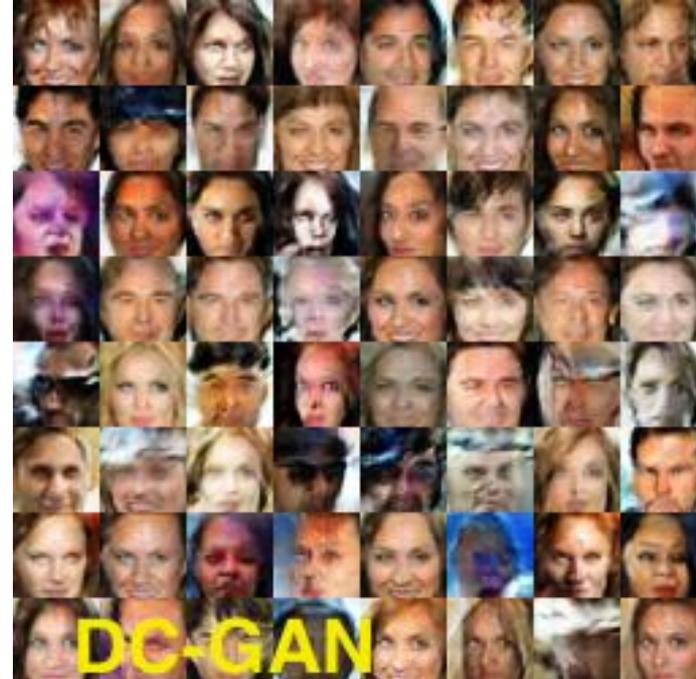
(f) GAP_{GAN4}

MIX + GAN

- Results

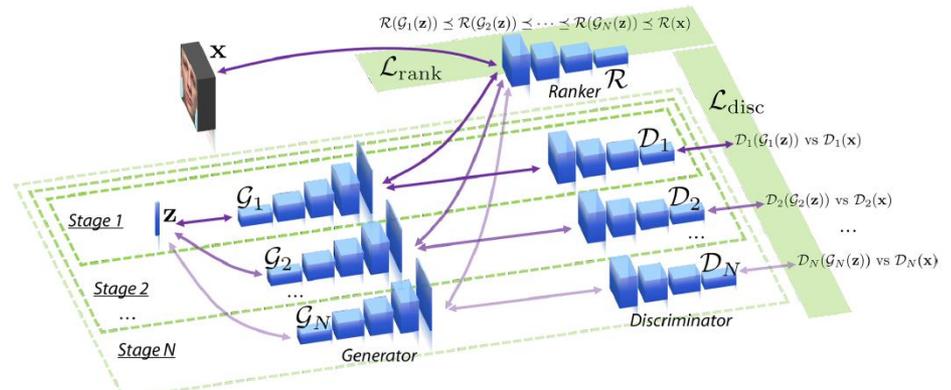


<http://www.offconvex.org/2017/03/30/GANs2/>



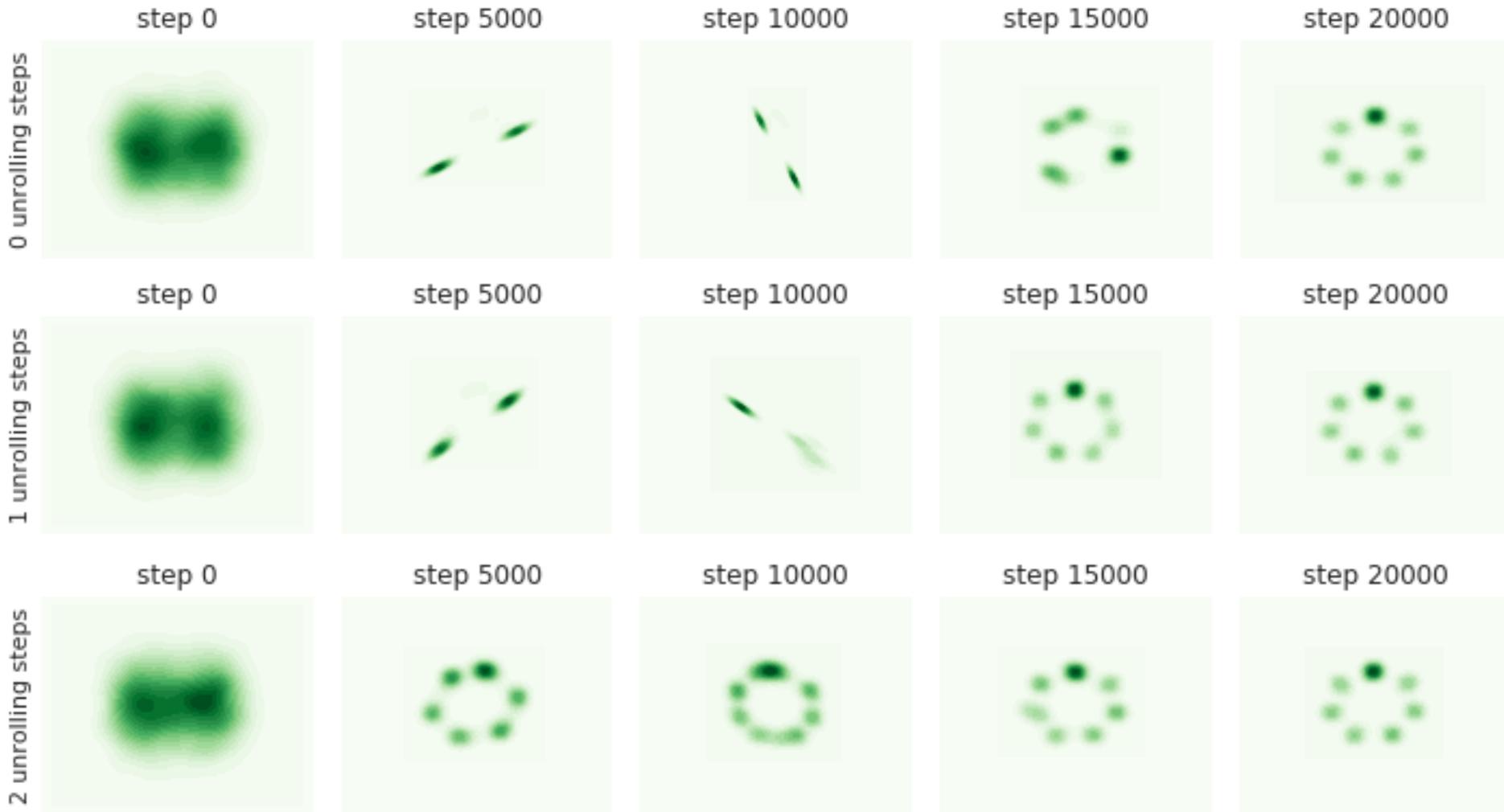
To learn more ...

- MAGAN: Margin Adaptation for Generative Adversarial Networks



- Multi-Agent Diverse Generative Adversarial Networks
- Message Passing Multi-Agent GANs
- AdaGAN: Boosting Generative Models
- Unrolled Generative Adversarial Networks

Unroll GAN – Experimental Results



Code: https://github.com/poolio/unrolled_gan/blob/master/Unrolled%20GAN%20demo.ipynb