Artificial Anime Character Design: An Application of Generative Adversarial Networks (GANs)

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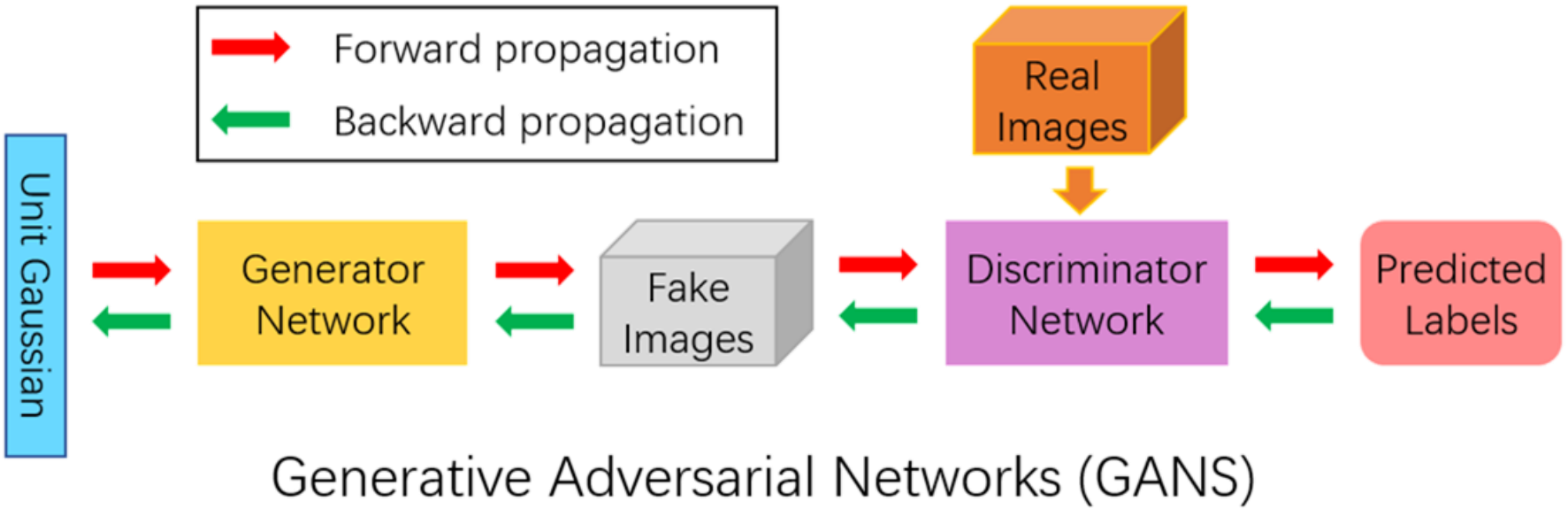
Motivation

- A framework for Deep Learning models to generate superficial data **mimicking** a training distribution
- Applied to many **image** categories successfully
- Previous attempts at generating anime character faces are **frequently defective**



Generative Adversarial Networks (GANS)

Sample training images

DCGAN (left) LSGAN (right) generated samples

StyleGAN generated samples
random (up) style mixing (down)

Conclusions

- **Artificial creation** of anime characters using GANs (DCGAN, LSGAN and StyleGAN)
- **StyleGAN** performing best both qualitatively and according to FID scores
- Open to **style mixing**, enabling **on-demand** feature generation
- **Streamlined** batch design of new anime characters