Spectral Normalization

Constrains Spectral Norm

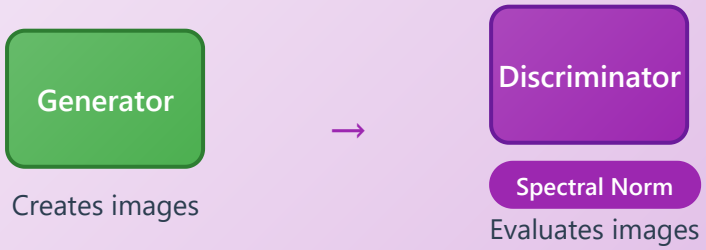
$$W_{SN} = W / \sigma(W)$$

Divides weights by **largest singular value** (σ)

✓ Ensures Lipschitz Continuity

Controls gradient flow through network layers

Critical for GAN Training



Key Features

- Constrains **spectral norm** of weight matrices
- Ensures **Lipschitz continuity** of network layers
- **Prevents gradient explosion** in discriminator
- Improves training stability **without batch statistics**

✓ Standard in GANs

Used in modern GAN architectures: **BigGAN, StyleGAN**