

## Other Improvement Techniques

Part 6/7: Advanced Techniques



### Cascaded Diffusion

Low-res generation → super-resolution



### Upsampler

Specialized diffusion model for upscaling



### Progressive Distillation

Student mimics T-step teacher in T/2 steps



### Consistency Models

One-step generation via consistency training



### Flow Matching

Alternative to diffusion with optimal transport



### Rectified Flow

Straightens probability paths for efficiency



### Adversarial Diffusion

Add adversarial loss for sharper samples



### Truncation Tricks

Early stopping or partial diffusion for control



### Categorization by Purpose



Quality



Speed



Alternative



Control

3 techniques

2 techniques

2 techniques

1 technique