Diffusion Models vs GANs

Comprehensive Feature Comparison

Criterion	Diffusion Models	GANs
⚖️ **Training Stability**	More stable, no adversarial collapse ✓	Can be unstable, risk of mode collapse
🎯 **Mode Coverage**	Captures all modes effectively ✓	May miss some modes
✨ **Sample Quality**	Comparable, often more detailed ✓	High quality, sometimes less detailed
⚡ **Generation Speed**	Slower (100-1000 steps)	Faster (1 step generation)
🔧 **Training Complexity**	Simpler loss, no discriminator ✓	Complex, requires discriminator tuning

☐ Advantage   ✓ Winner in this category