

The Generative AI Landscape

VAEs

- Probabilistic
- Smooth latent
- Blurry outputs
- Stable training

GANs

- Adversarial
- Sharp outputs
- Mode collapse risk
- Training unstable

Modern systems
combine approaches

Diffusion

- Iterative
- Highest quality
- Slow sampling
- Stable

Transformers

- Sequential
- Excellent for text
- Scalable
- Left-to-right