

Motivation: "Diffusion + GAN for one-step generation"

🙵 Denoising inference is time-consuming and expensive. 💰

↓ Model distillation

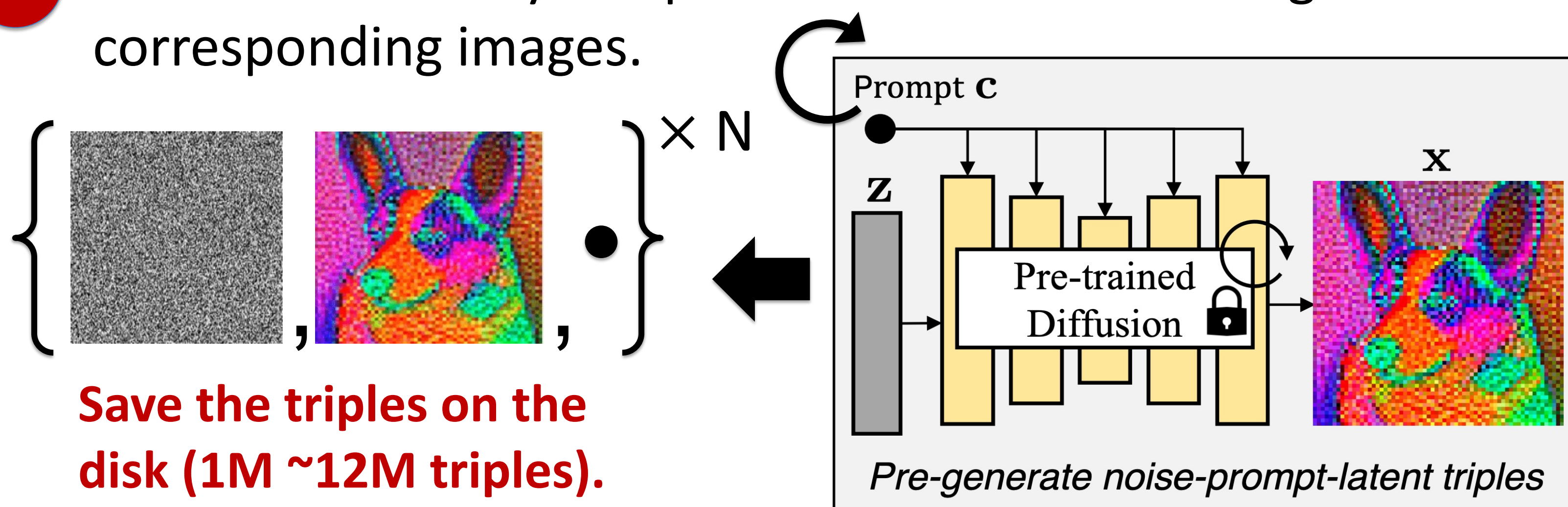
😊 One-step image generation 💰 🌱

We propose one-step Diffusion2GAN generator!

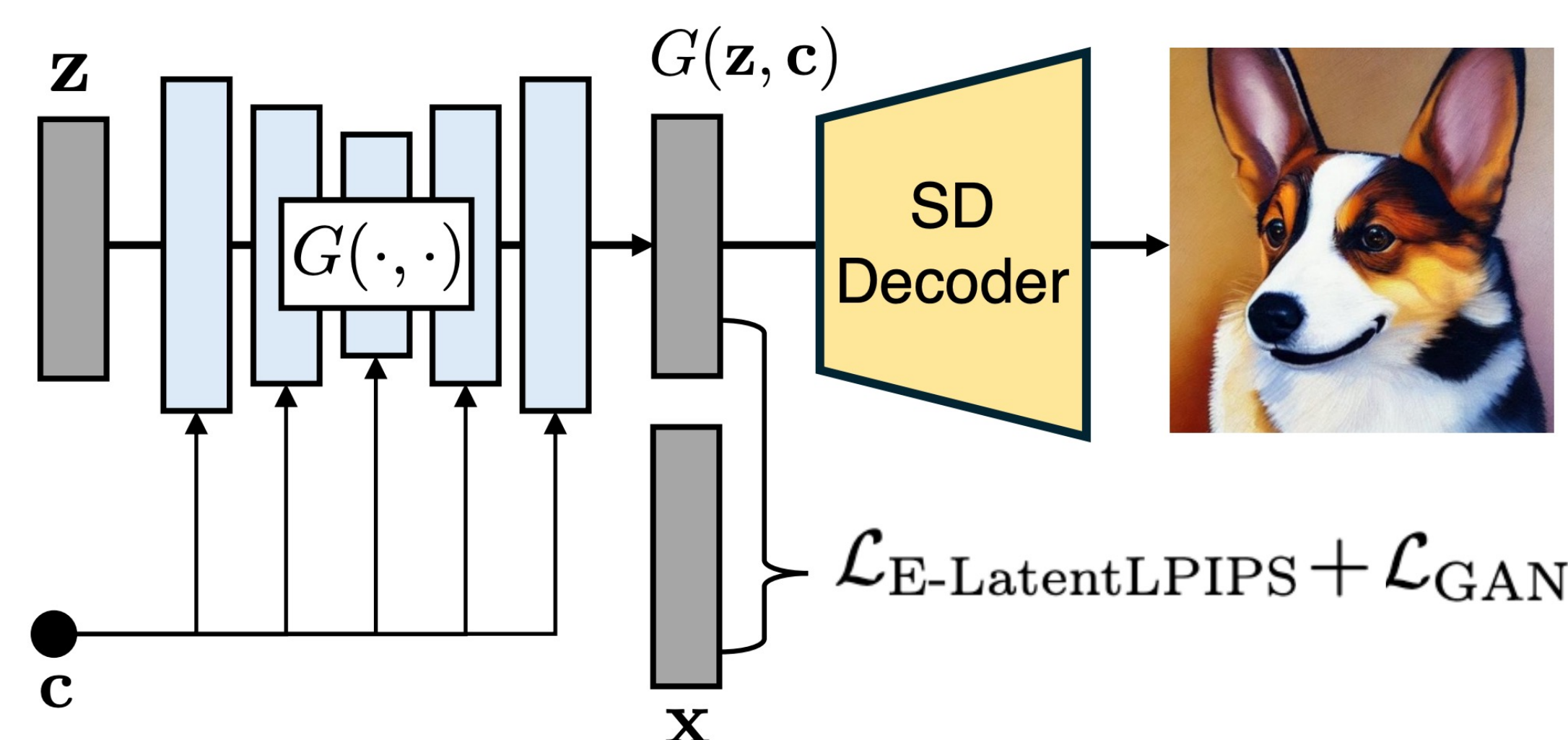
- a) Fast inference
- b) High-quality
- c) ODE preserving distillation
- d) Diverse image generation

Distillation procedure: "Training a conditional GAN"

- 1 Simulate randomly sampled Gaussian noises and get their corresponding images.

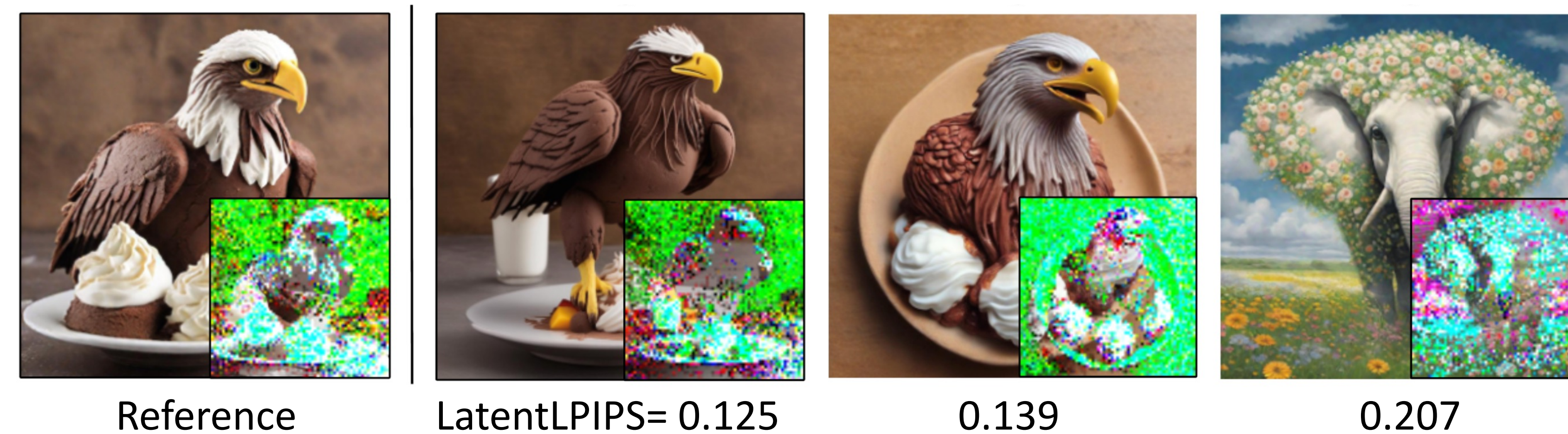
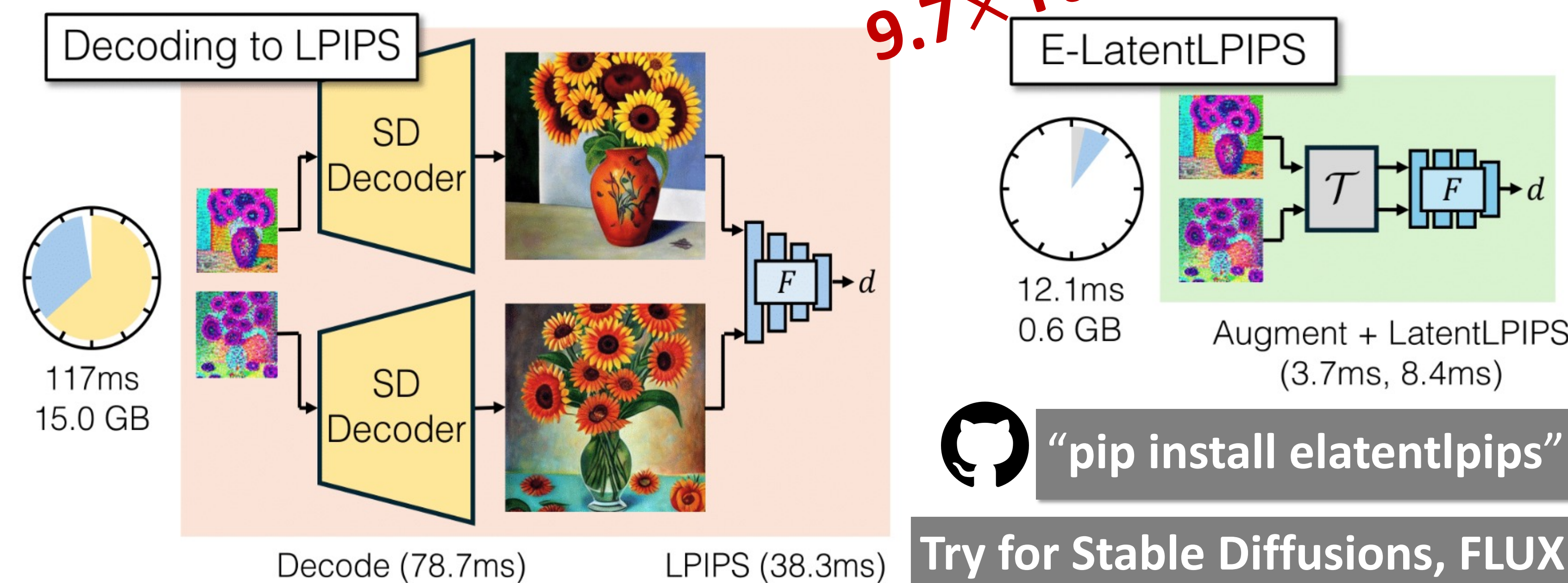


- 2 Train a conditional GAN where the inputs are noise and prompts, and the targets are their ODE solutions.

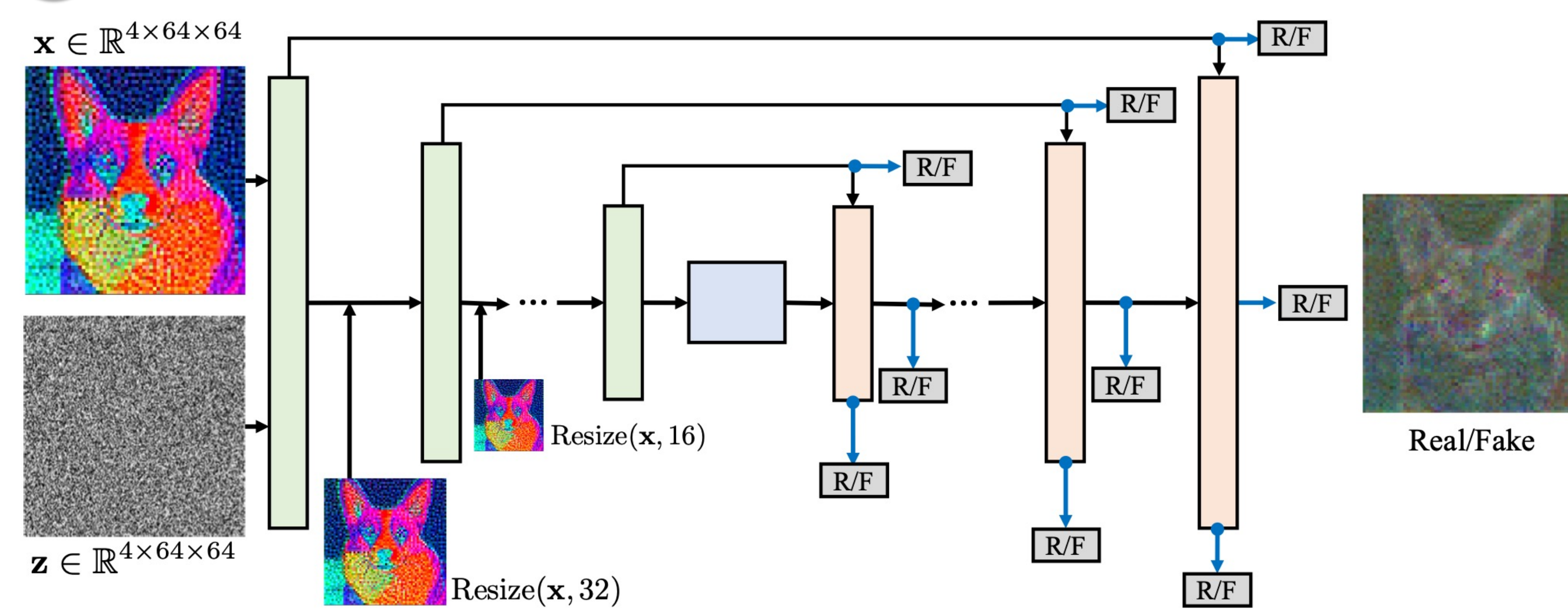


Latent space training: "Everything in latent space"

G Perceptual loss for LDM



D Multi-scale I/O conditional discriminator

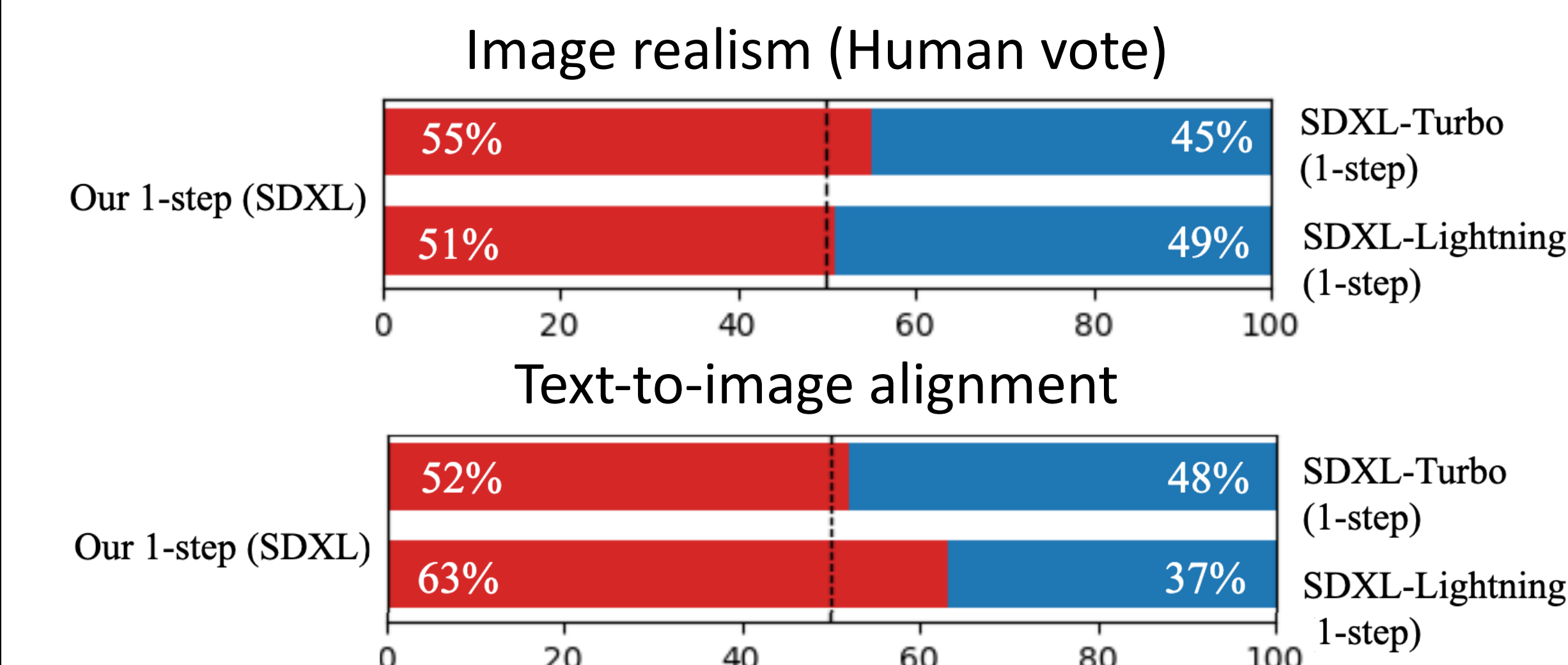


Evaluation: "Comparable to the latest distillation work"

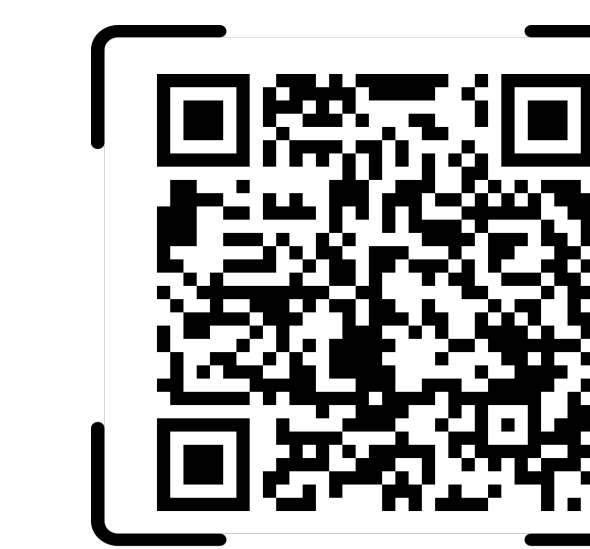
"A cinematic shot of a little pig priest wearing sunglasses."



ODE preserving distillation: "Mimic teacher diffusion."



Our project page:



SCAN ME