1 Overview

Art-free base + **Few-shot opt-in adapters** → **Competitive style with artist control**

(a) Blank Canvas Diffusion

(b) Opt-In Art Adapter

(c) Prompt: *"People kayaking in green water surrounded by blooming lotus flowers."*

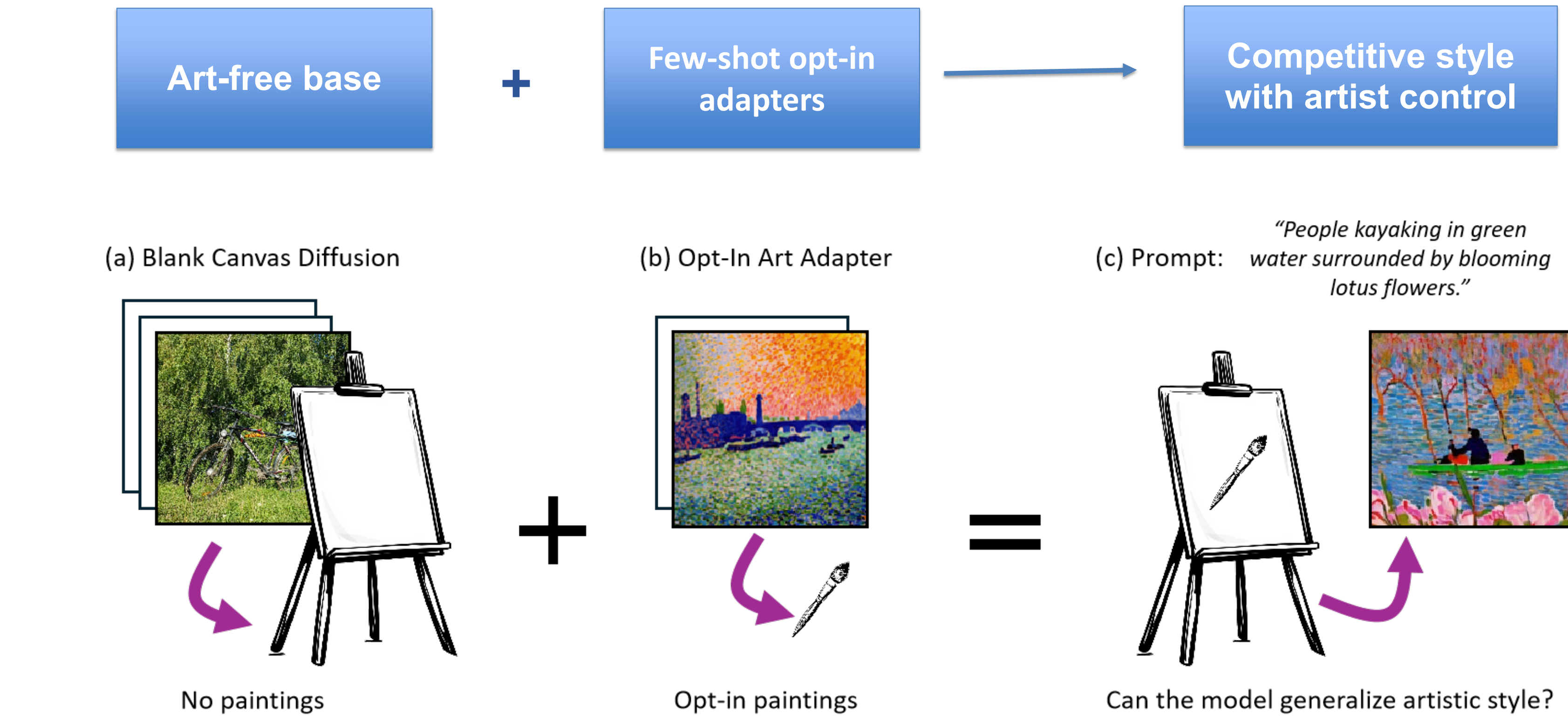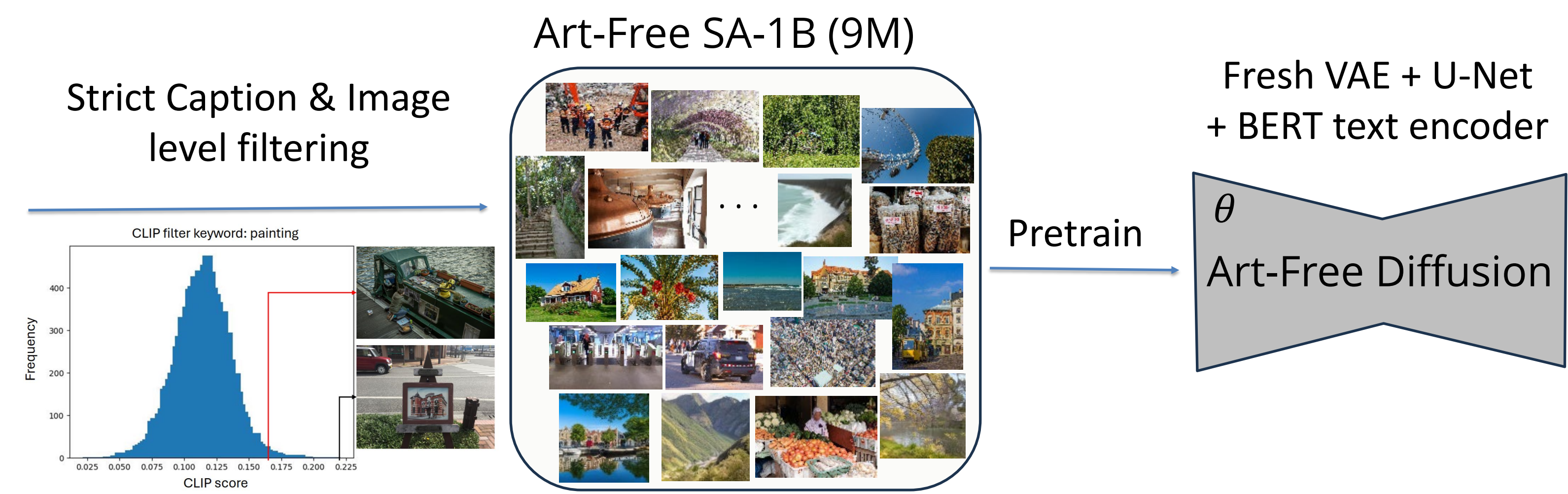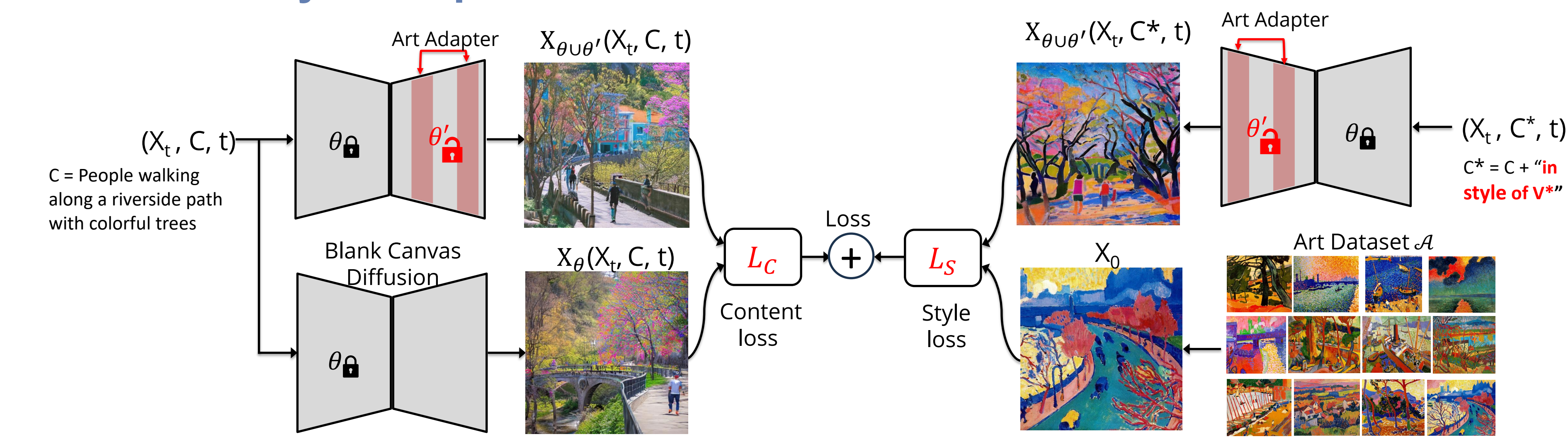No paintings + Opt-in paintings = Can the model generalize artistic style?

Why It Matters

- High-quality artistic output can emerge from an art-free core with voluntary, opt-in adapters.
- Gives artists practical control over when and how their styles appear in generations.

2 Blank Canvas Diffusion — Art-Free Foundation

Strict Caption & Image level filtering

Art-Free SA-1B (9M)

CLIP filter keyword: painting

Fresh VAE + U-Net + BERT text encoder

Pretrain

θ Art-Free Diffusion

3 Artistic Style Adapter

Art Adapter $X_{\theta \cup \theta'}(X_t, C, t)$

(X_t, C, t)

θ θ'

C = People walking along a riverside path with colorful trees

Blank Canvas Diffusion

$X_\theta(X_t, C, t)$

L_C Content loss

$+$

L_S Style loss

$X_{\theta \cup \theta'}(X_t, C^*, t)$

Art Adapter

θ' θ

(X_t, C^*, t)

$C^* = C +$ "**in style of V***"

X_0

Art Dataset $\mathcal{A}$

- **Few-shot LoRA fine-tuning** on opt-in painting sets (9–50, avg. 22).
- **Content-preserving training**: explicitly disentangle content and style.

Opt-In Art: Learning Art Styles Only from Few Examples

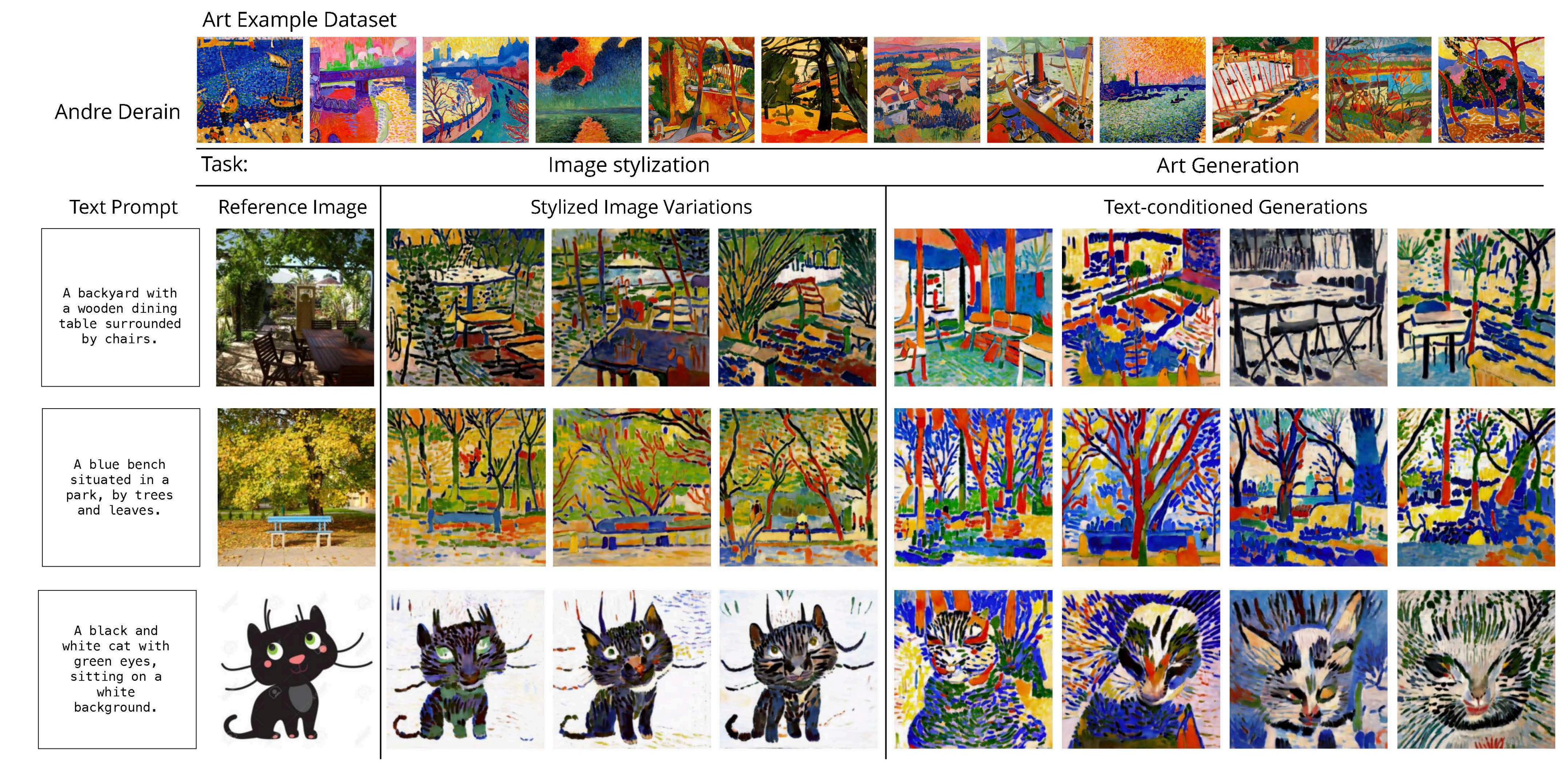Hui Ren*[1,2] Joanna Materzyńska*[2] Rohit Gandikota[3] Giannis Daras[2] David Bau[3] Antonio Torralba[2]

UIUC[1], MIT[2], Northeastern University[3]

Website

Paper

Looking for Summer 2026 Research Internship
GenAI/VLM/UMMs

4 Experiments

4.1 Artistic style generation & Image stylization

Art Example Dataset

Andre Derain

Text Prompt

Task: Image stylization | Art Generation

Reference Image | Stylized Image Variations | Text-conditioned Generations

A backyard with a wooden dining table surrounded by chairs.

A blue bench situated in a park, by trees and leaves.

A black and white cat with green eyes, sitting on a white background.

4.2 Adapter strength control

Natural → Artistic

4.3 Data attribution

Generated Image | Top Attributed Images from the Training Sets

Lichtenstein

Blank Canvas Dataset

Art-Style Examples

A large modern house with a swimming pool in the backyard.

4.4 Baseline Comparison

% Users Preferring Blank Canvas Diffusion (Adapter) compared to baseline methods

67.0%	StyleAligned (★)
34.8%	StyleAligned (SD1.4)
60.4%	InstructPix2Pix
77.8%	Plug and Play
52.6%	SD1-4 (Text+Adapter)
52.6%	SD1-4 (Adapter)
65.8%	SD1-4 (Text)

Automatic Evaluation

Style Score (CSD) →

StyleAligned (SD1.4)

Blank Canvas Diffusion (Adapter)

SD1-4 (Adapter)

SD1-4 (Text+Adapter)

InstructPix2Pix

SD1-4 (Text)

StyleAligned (★)

Plug and Play

Content Score (ViTc) →

Real Image | CycleGAN | Style-Aligned SD1-4 | SD1-4 (Text) | SD1-4 (Text+Adapter) | SD1-4 (Text+Adapter1.25) | SD1-4 (Adapter) | SD1-4 (Adapter1.25) | Ours

A lemon tree with a large yellow lemon hanging from it

a breathtaking view of a waterfall cascading down a rocky cliff

NEURAL INFORMATION PROCESSING SYSTEMS