Inverse Image Editing: Recovering a Semantic Editing History from a Before-and-After Image Pair

Shi-Min Hu\textsuperscript{1} Kun Xu\textsuperscript{1} Li-Qian Ma\textsuperscript{1} Bin Liu\textsuperscript{1}
Bi-Ye Jiang\textsuperscript{1} Jue Wang\textsuperscript{2}
\textsuperscript{1}TNList, Tsinghua University, Beijing \textsuperscript{2}Adobe Research

\textbullet{} To better see differences between images, please use navigation keys (← and → on the keyboard) to flip between pages.
The following pages contain all the 21 image editing examples for user study. Each example contains the before-and-after image pair, the original editing history by artists, and our recovered editing history.
Example 1
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Example 2
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Example 3
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Supplemental Document

User Study: Example 4

Example 4
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Example 6
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Example 7
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Example 8
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Example 9
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Example 10
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Example 11
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Example 12
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Supplemental Document

User Study: Example 13

Example 13
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Example 14
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Example 15
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Example 16
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Example 17
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3

![Two backpacks on a shelf, one blue and one red, with a label on the blue one.](image)
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Example 18
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Example 19
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
OurRecoveredSequence:Step1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Example 20
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
Our Recovered Sequence: Step 3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
Our Recovered Sequence: Step 6
Our Recovered Sequence: Step 7
Example 21
Before-and-after image pair

Before-edit image

After-edit image
Artist Generated Sequence: Step 1
Artist Generated Sequence: Step 2
Artist Generated Sequence: Step 3
Artist Generated Sequence: Step 4
Artist Generated Sequence: Step 5
Artist Generated Sequence: Step 6
Our Recovered Sequence: Step 1
Our Recovered Sequence: Step 2
OurRecoveredSequence:Step3
Our Recovered Sequence: Step 4
Our Recovered Sequence: Step 5
In the table below, for each example, we give the number of participants judging as “artist’s is better”, “ours is better”, and “about equal”, respectively.

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