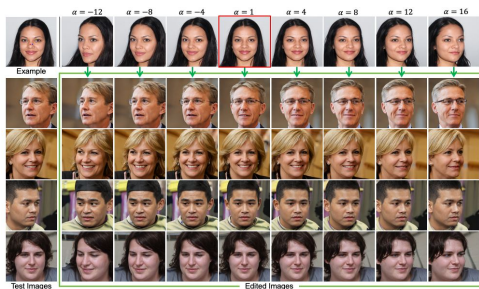


Edit One for All: Interactive Batch Image Editing

What is the problem?

While recent advances have improved single-image editing, there's been little focus on simultaneously editing large batches of images. The goal is to transfer an edit specified on an example image to multiple test images, ensuring they all reach the same final state regardless of initial conditions, while minimizing human supervision.



What has been done earlier?

- ❑ **Single-image editing methods:** Techniques like DragGAN allow users to manipulate images through interactive point-based dragging. These require manual annotation for each image, making batch editing time-consuming.
- ❑ **Text-guided editing approaches:** Methods like StyleCLIP enable editing using text prompts. However, these often struggle with consistency when applying the same edit across multiple images.



Edit One for All: Interactive Batch Image Editing

What are the remaining challenges?

- ❑ **Transfer of edits:** Developing a method to effectively capture and transfer edits from a single example image to multiple test images, preserving both the type and strength of the edit across diverse starting conditions.
- ❑ **Consistent final states:** Ensuring that all edited images achieve the same final state, regardless of their initial conditions. This requires automatically adjusting the edit strength for each individual image in the batch.

What novel solution proposed by the authors to solve the problem?

- ❑ **Modeling edits as globally consistent directions:** Capturing user edits as consistent directions in StyleGAN's latent space, allowing effective transfer of edits across images.
- ❑ **Automatic adjustment of edit strength:** Deriving a closed-form solution to compute appropriate edit strength for each test image, ensuring consistent final states without manual adjustment.