Example 1:

Original Image

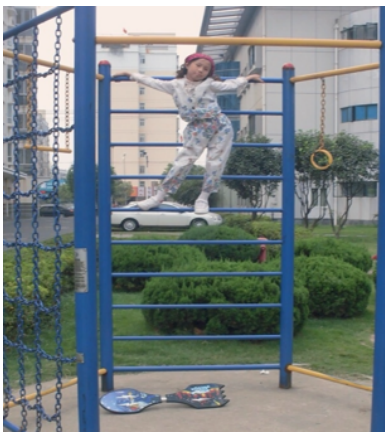
1243 x 932 x3

Content-Aware Resizing (1)

1243 x 832 x3

Content-Aware Resizing (2)

1243 x 732 x3

Resampling (1)

1243 x 832 x3

Resampling (2)

1243 x 732 x3

I first removed 100 seams vertically, then another 100 seams in the same direction to achieve the final result. This was a successful example of content-aware resizing because the algorithm was able to reserve the main object of the image, which is the kid on the top of the ladder. The algorithm carved around this area in order to preserve the content of the main area. The height reduction was able to be achieved by repeatedly reducing the green and blue areas, as well as the ground to reserve the rest of its properties. Even though the end product may seem a bit squished at the bottom, this result was still significantly better than the result reached by regular re-sampling, in which both the person and the car and building in the back lost their original values.

Example 2:

Original Image

733 x 548 x 3

Content-Aware Resizing

733 x 448 x 3

Resampling

733 x 448 x 3

This was achieved by removing 100 seams vertically. The result was this was not pleasant due to the unevenness around the leg area of the girl. The seam-carving process began by constantly removing the leg area of both people since it was constantly detected as an area that could be eliminated, therefore it was removed as the system considers it as an unimportant part. The low contrasts in those areas manipulated the systems to choose these as the selected seams in the energy maps.

Example 3:

Original Image

496×459 x3

Content-Aware Resizing (1)

446×459x3

Content Aware Resizing (2)

346×459 x3

Resampling (1)

446×459 x3

Resampling (2)

346×459 x3

This was achieved by removing 50 seams horizontally, then another 100 seams horizontally. This was also a successful example of image resizing because it successfully reserved the facial features of everyone in the image. Despite the loss in the background and minor body parts of people around the edge, the impressive features on everyone's face still were maintained almost perfectly. The seam carving started by removing the background low contrast regions, such as the trees and the bushes. The areas that obtain high levels of contrast and diversity were successfully delivered through the algorithm.

More Successful Examples

Original Image

Content-Aware Resizing (1)

Content-Aware Resizing (2)

Original Image

Content-Aware Resizing (1)

Content-Aware Resizing (2)
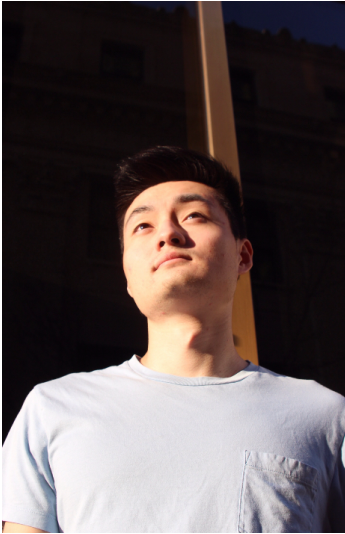
Original Image

Content-Aware Resizing (1)

Content-Aware Resizing (2)

Original Image

Content-Aware Resizing (1)

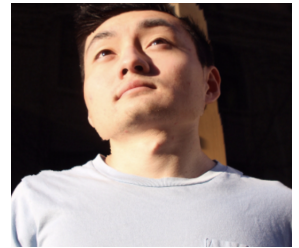Content-Aware Resizing (2)

Failed Example

Original Image

Content-Aware Resizing (1)

Content-Aware Resizing (2)

Resampling (1)

Resampling (2)