Part II. Results

Original

Reduce Height 200

Conventional Resize

Reduce Height 400

Conventional Resize
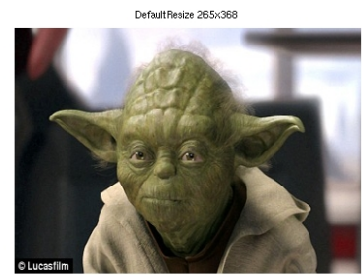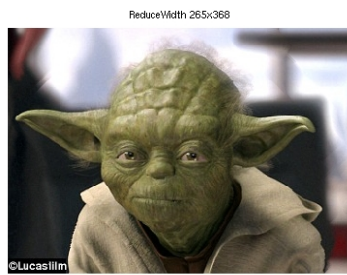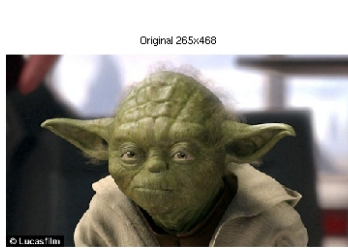
Original

Reduce Width 400

Conventional Resize

Original 265x468 • ReduceWidth 265x368 • DefaultResize 265x368

Yoda image from www.dailymail.co.uk – ©Lucasfilm

Doing a horizontal resize of Yoda by 100 pixles does a nice job here by removing empty space, but begins to break into the face a bit. The extra space on the left is removed nicely, while that of the left is not.

Original 265x468 • ReduceWidth 265x268 • DefaultResize 265x268
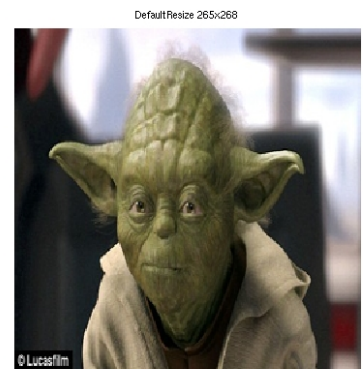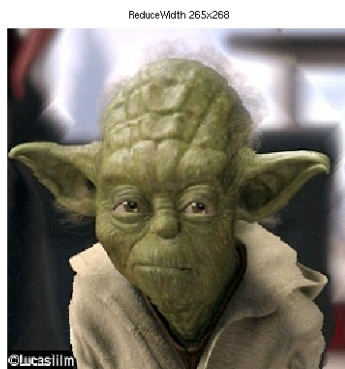
Going to 200 pixels removed begins to cause issues for Yoda's face, but this is to be expected as there start being less and less seams to cut away at that won't affect the base content.

Original 447x602 • ReduceWidth 447x402 • DefaultResize 447x402
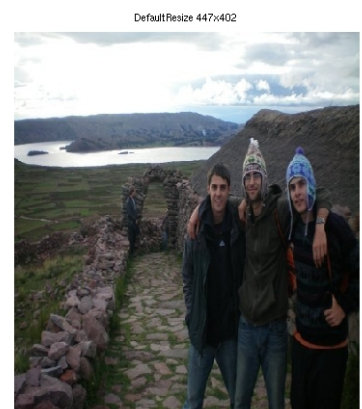
Here we can see a failed instance of seam carving away 100 pixels horizontally where there is too much texture in the rocks. The only thing that saves my brother's and my face are our funky, texture filled hats, whereas our poor friend Zack ends up being carved out. All of our legs also took a beating here as our pants also did not have a high gradient magnitude.

Doing a height reduction of 100 pixels does much better in compressing the sky as there are no strong gradients along it. Zack again here gets an odd change of expression that he wouldn't be too happy about, but overall most of the content is nicely preserved.

Original

ReduceWidth 200 + ReduceHeight 200
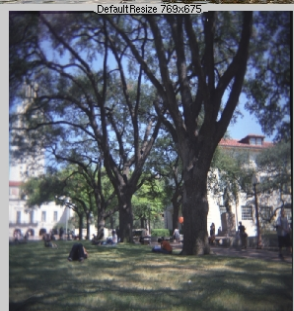
This was based on an original image I used for the first part of the assignment. The results are nice in that they clearly preserve all of the content in the image. It is also interesting to note that the algorithm takes the first instances of a lowest cost path, so the gap between the left images is removed before that of the right images; this could be easily altered through randomization. This may be a somewhat artificial example but it does nicely display a potentially useful aspect of this sort of image resizing that could be much faster than cropping the image in portions manually.

Original   ReduceWidth 200   Reduce 400
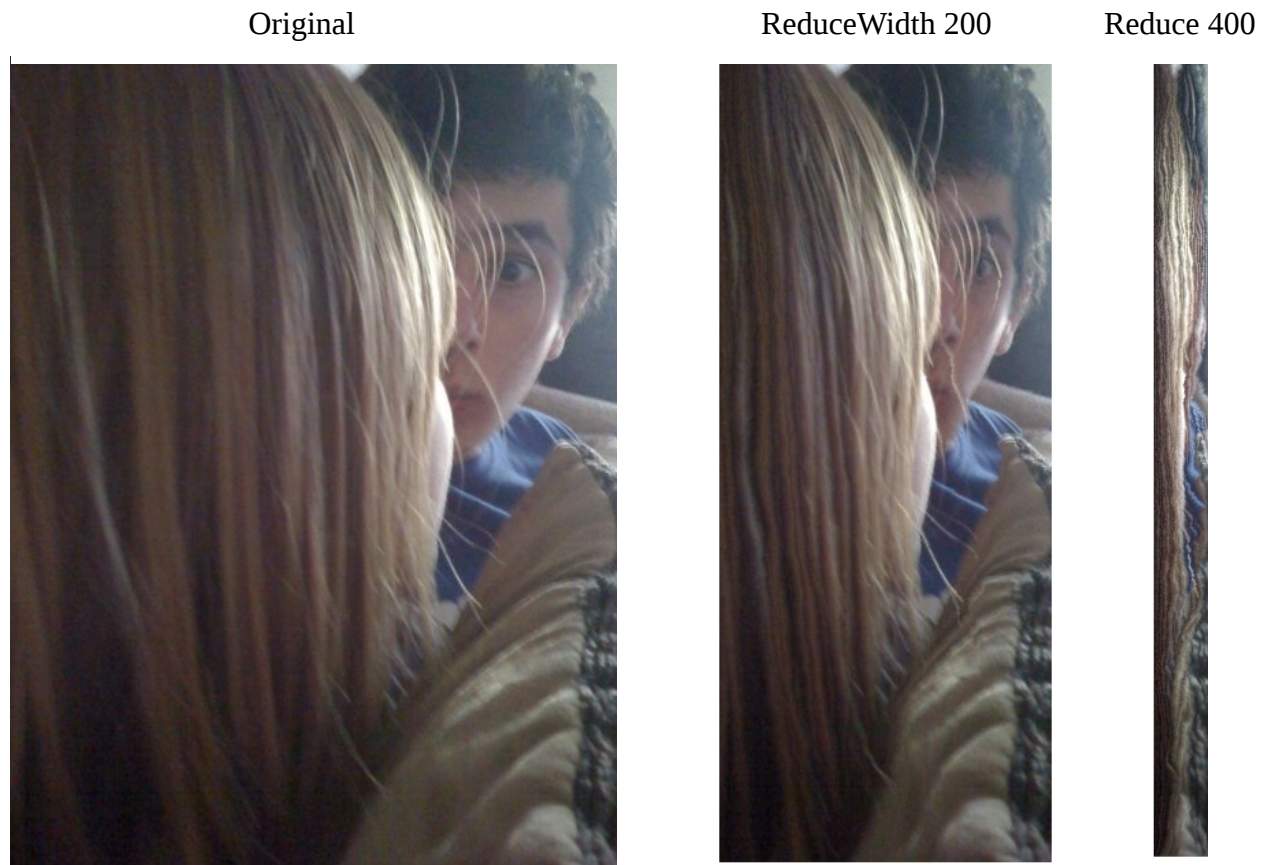
Conventional Resize
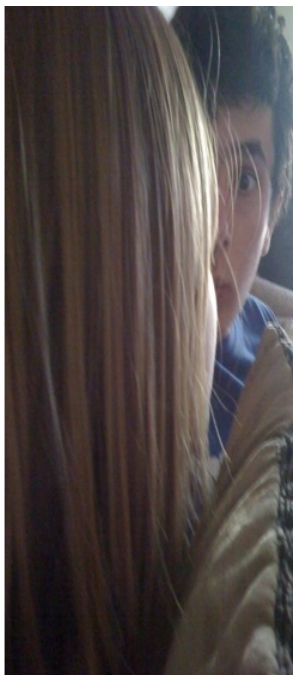
This example displays interesting results in that it compresses the hair as most seen in reducing the width by 400. In this case it seems like a conventional resize may somewhat preserve the content better in that the seam carved result alters the face in a slightly odd way.