

Victor Vu ; UTCS Account : diragjie ; UTEID : vv995
09/21/09
Computer Vision – Pset 1
ONE DAY LATE

Question 5



Image: groceries.jpg

Input Dimension : 500x375

Output Dimension : 300x375

Method : Vertical seam removal.

Explanation: Warping space/gravity lens effect created from non-column seams. This happened because the image had a lot of vertical edges but very few horizontal ones. This made pretty much any seam fair game. Hence the horrible removal order. Bad example.

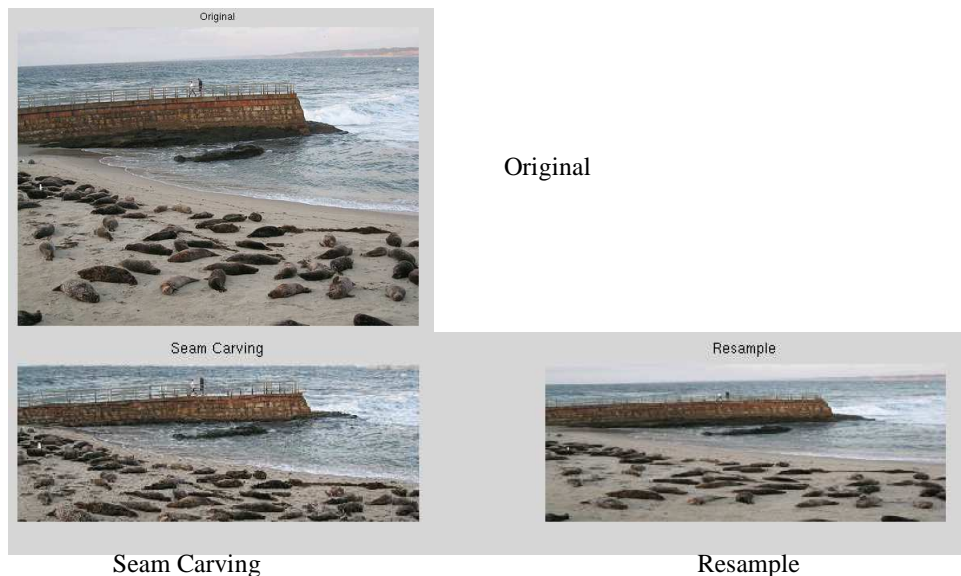


Image: seals.jpg

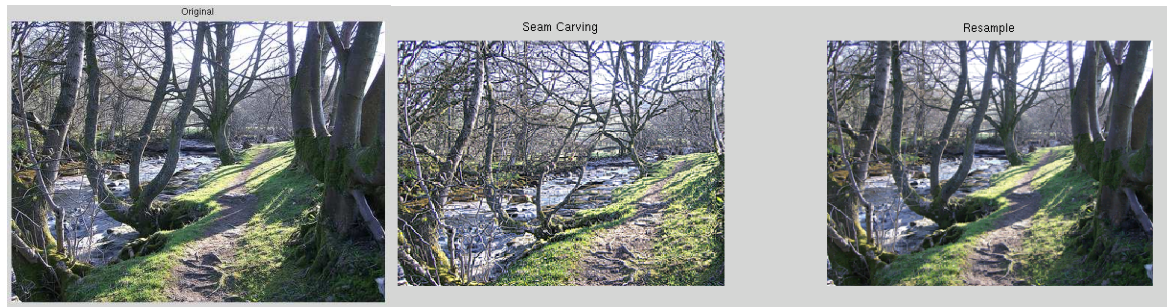
Input Dimension : 500x375

Output Dimension : 500x175

Method : Horizontal seam removal.

Explanation: This example is very similar to cropping the top and bottom of the image, which has low energy areas such as the sky and the sand. Part of the bottom of the pier was also removed.

Victor Vu ; UTCS Account : diragje ; UTEID : vv995
09/21/09
Computer Vision – Pset 1
ONE DAY LATE



Original

Seam Carving

Resample

Image: trees.jpg

Input Dimension : 500x375

Output Dimension : 300x225

Method : Alternating horizontal and vertical seam removal.

Explanation: The image turned out much busier than the original, probably because pixels were removed instead of resampled.



Original

Seam Carving

Resample

Image: pots.jpg

Input Dimension : 500x333

Output Dimension : 300x222

Method : Alternating horizontal and vertical seam removal.

Explanation: Some of the pots were deformed, so the table and its contents look bad, but the person in the background was not compressed (although his head was cut off).

Victor Vu ; UTCS Account : diragjie ; UTEID : vv995
09/21/09
Computer Vision – Pset 1
ONE DAY LATE



Original

Seam Carving

Resample

Image: school.jpg

Input Dimension : 500x328

Output Dimension : 100x217

Method : Alternating horizontal and vertical seam removal.

Explanation: This is seam carving to the extreme. So many vertical seams were removed that the image began to warp. On the bright side, the flowers survived relatively intact and the white building at the top turned into a cool looking dragon-like head. Bad Example.



Image: school.jpg

Input Dimension : 330x500

Output Dimension : 110x167

Method : First vertical then horizontal seam removal.

Explanation: Once again, seam removal fails in a very big way. There were just too many seams to remove. The resampling approach worked much better, especially since aspect ratio was maintained. The seam carving image, while not looking anything like the original image, still looks nice, looks like something from a futuristic game (the rows of people look like rows of buildings). Also interesting is the fact that the URL credits at the bottom was preserved rather well. It's possible to make out the "www" and "Paz" parts. Bad Example.

Victor Vu ; UTCS Account : diragjie ; UTEID : vv995

09/21/09

Computer Vision – Pset 1

ONE DAY LATE

Image acknowledgements: Thanks to the following Flickr users for sharing their photos under the Creative Commons license:

seals.jpg is provided by allotrope.

trees.jpg is provided by russelljsmith.

groceries.jpg is provided by The Consumerist.

pots.jpg is provided by zedvox.

school.jpg is provided by Wonderlane.

kite.jpg is provided by Paz Leonel.