

COL783: Image Resizing

Assignment 0

Bilinear Interpolation

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Assumption: No prior assumption

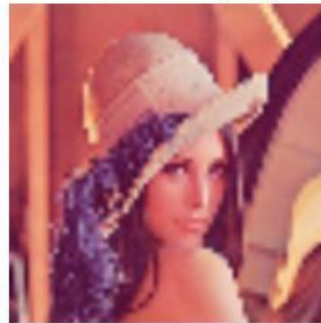
Methodology: Implementation was simple since we have the formula to perform interpolation which is nothing but finding the gradient of two points and now fill in the new points in between using the slope and y intercept since we wanted to perform both expansion and contraction we first performed interpolation to all the rows, once we have target size number of rows and source size number of columns we again performed interpolation to columns to get desired shape

Results:

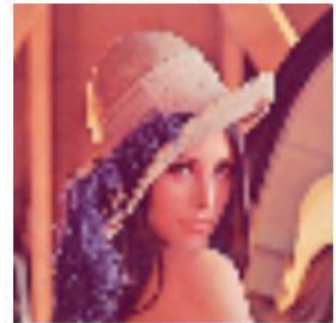
original (64, 64, 3)



inbuilt interpolation (300, 300, 3)



my interpolation (300, 300, 3)



RMS change mask (threshold=None)



RMS change mask (threshold=15)



RMS change mask (threshold=30)



Conclusion: you can reshape to any size you want.