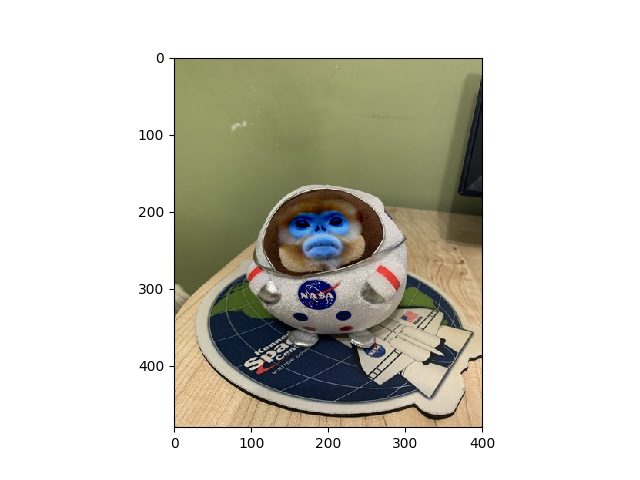
Seamless Cloning

Tamer Ghattas | Computational Photography | 18.5.2021

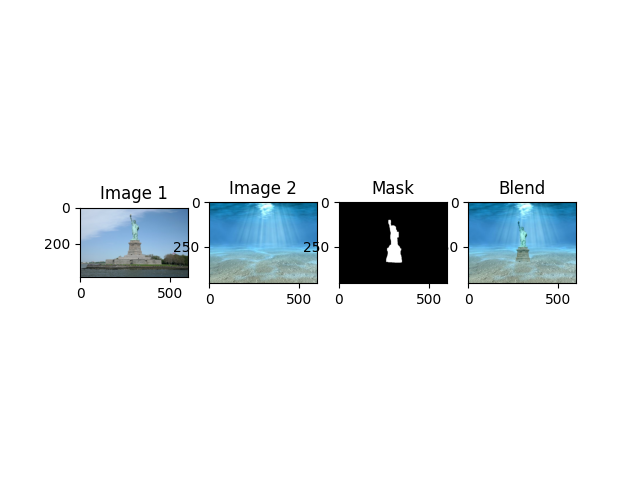
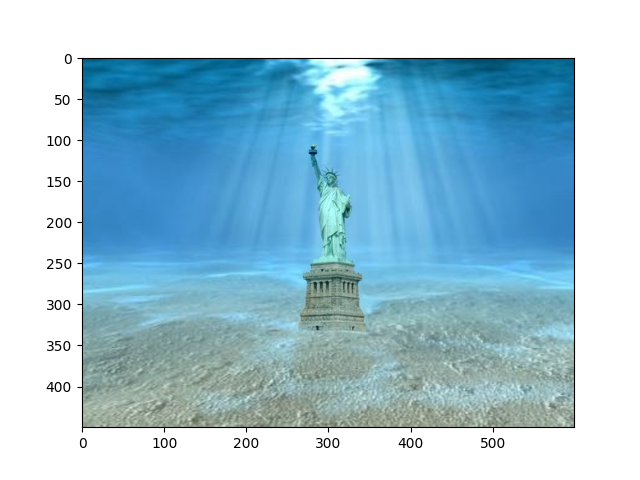
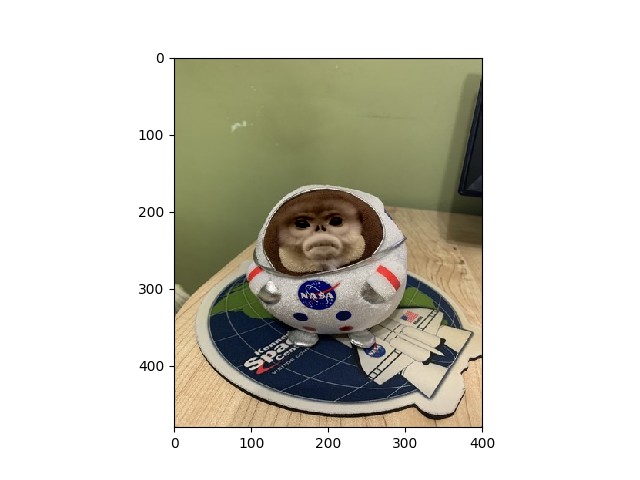
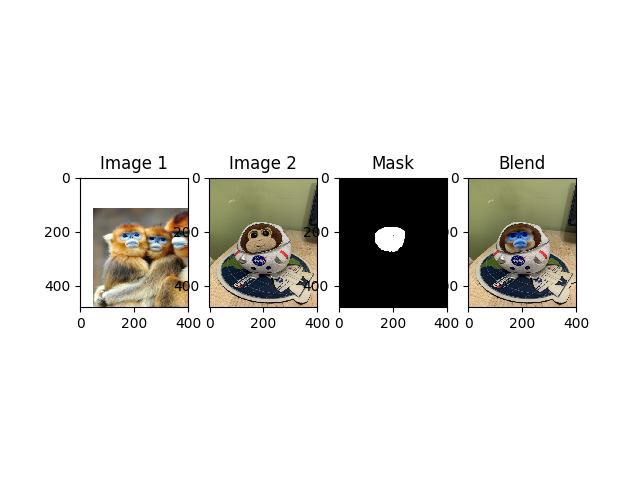
# Part A

I’ve followed the paper in solving the equation #4:  
 over Ω with =

In the implementation I’ve used a binary mask as Omega and have built a linear equation where for each pixel, a variable in the equation system, and set equation inside the mask based on Poisson discrete matrix while set outside the mask as the identity matrix. Whereas on the right hand side of the equation, is a vector having a pixel inside the mask the value of operating div g = div “source” and target value for those outside the mask.

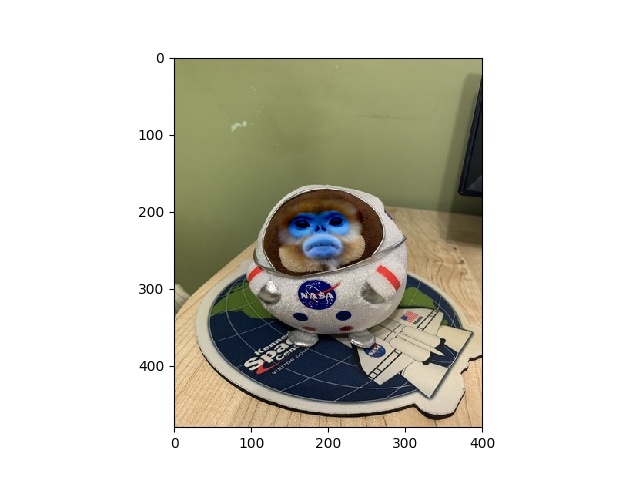
Results: 

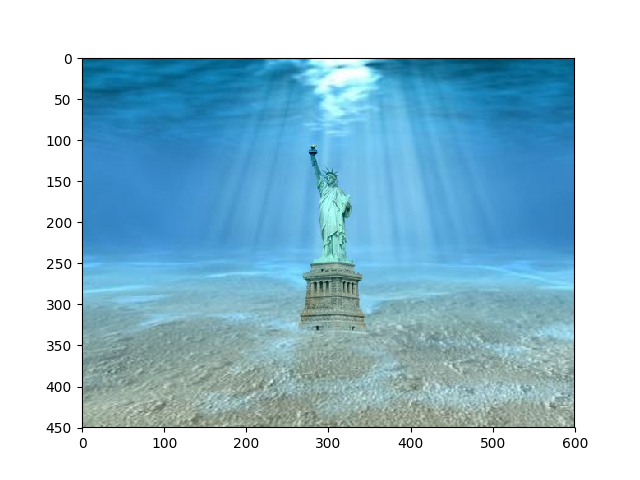
Since there has been darkening to the center of the source image monkey face color, I’ve also tried using the source as monochromatic and got:  
  
  
Additional example:

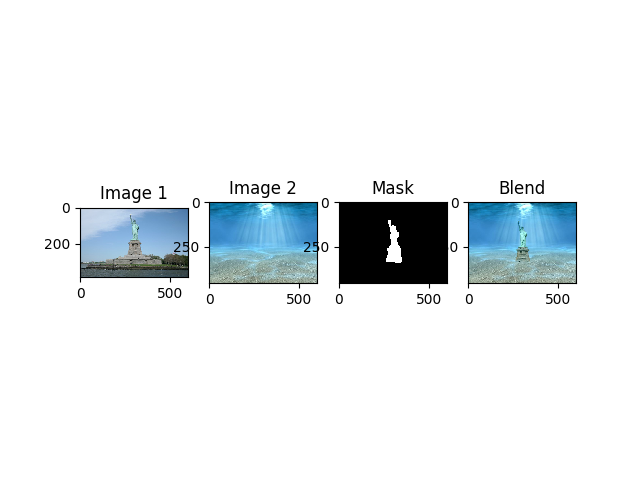
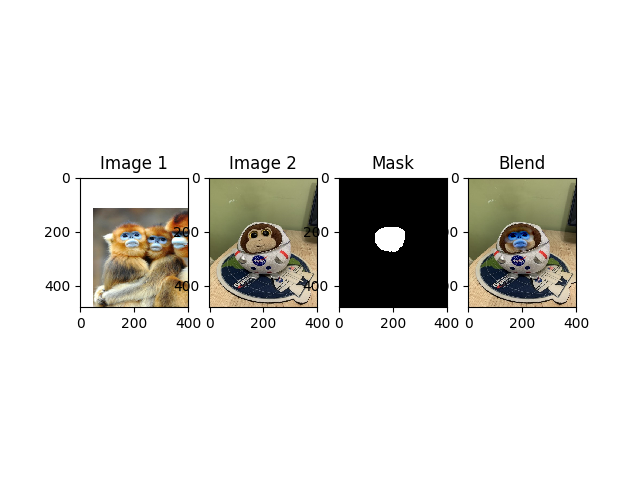


# Part B

As for this part, I’ve followed the revert section in the “Convolution Pyramids” paper and built in the implementation a Shepard’s interpolation kernel.

Results: 

Additional example:  




# Part C

You might like the photo on the cover page as much as we do, but if it’s not ideal for your report, it’s easy to replace it with your own.

Just delete the placeholder picture. Then, on the Insert tab, click Picture to select one from your files.