Programming Assignment 4 Report

Thomas Cousins

UIN: 927004846

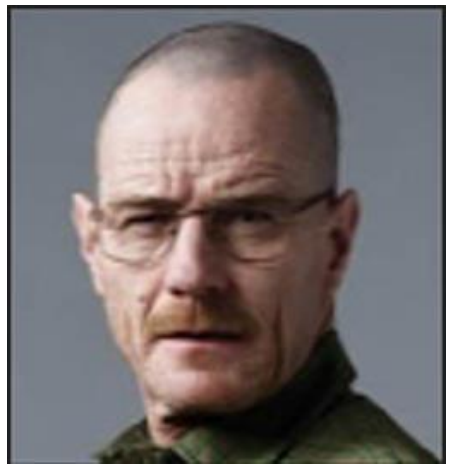
CSCE 748

Test_01

Naïve (alpha=1)

Mixing (Alpha= .5)

Test_02



Naïve (alpha=1)

Mixing (Alpha= .5)

Test_03

Naïve (alpha=1)

Mixing (Alpha= .5)

Test_04

Naïve (alpha=1)

Mixing (Alpha= .5)

Test_05

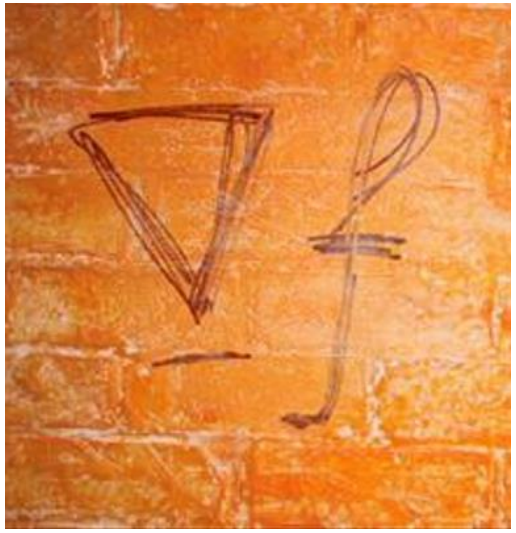
Naïve (alpha=1)

Mixing (Alpha= .5)

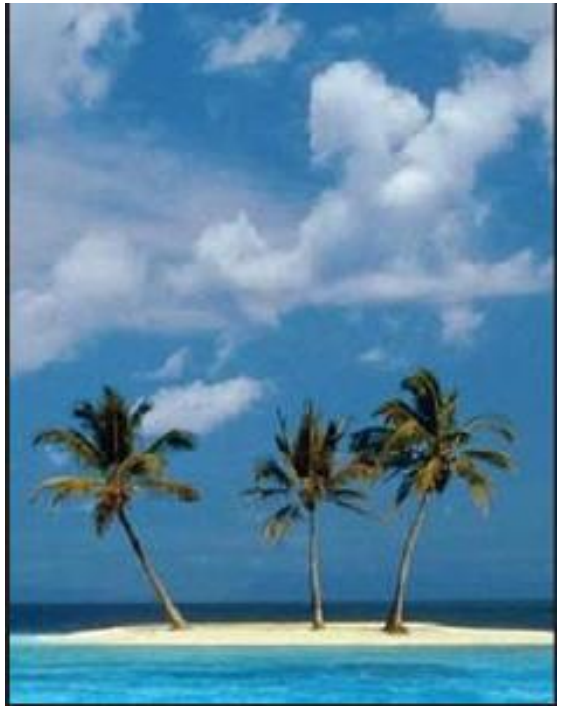
Test_06

Naïve (alpha=1)

Mixing (Alpha= .5)

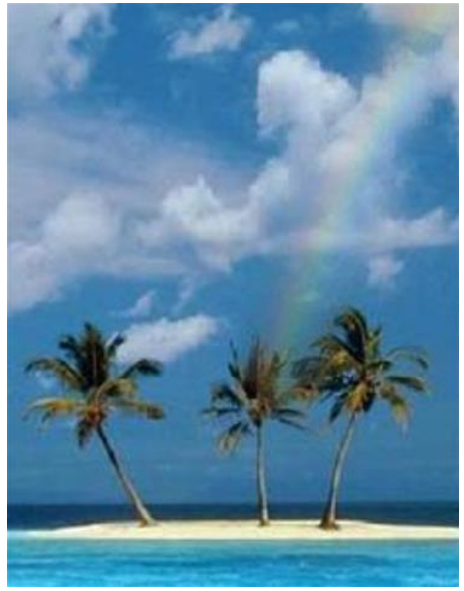


Test_07



Naïve (alpha=1)

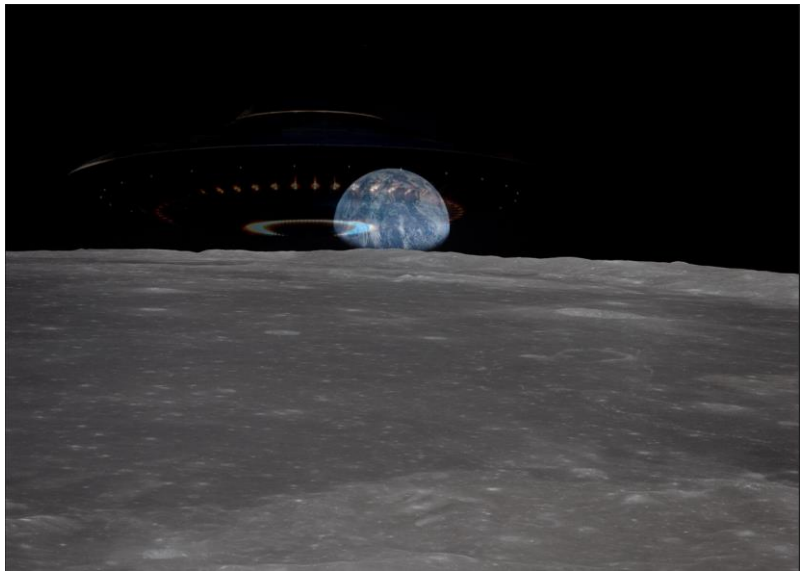
Mixing (Alpha= .5)



My Example

Naïve (alpha=1)

Mixing (Alpha= .5)



Discussion

Implementation:

This will be a brief dive into the implementation, as the code should contain most details. In order to perform the Poisson Blend, several steps had to be followed. These are, in order:

1. Pre-Processing, padding to ensure the boundary condition could be processed.
2. Generating the Sparse Matrices.

    2a. In the matrixParameters function, the row indices, column indices, A values and B values are generated. This is then used to create the sparse matrice. This was done separately because it was a long section.

3. Solving the system of equations using spsolve.
4. Post-processing. This includes clipping and resizing the image to get rid of padding.

Results:

In many cases, either the alpha of 1 or .5 sufficed for merging these images. In my example, the alpha of 1 showed up quite nicely and even gives the appearance of a reflection off of the UFO. In test 7 and 6 we see cases where the background information needs to be preserved, so these look better with an alpha of .5