

# Programming Assignment No 3

## Simple Compositing

Pedro Sassen Veiga

219433

For the Part I of the assignment, the provided images were composed using the provided script for Matlab. The results are shown in the Figure 1.0 and 1.1.

Figure 1.0

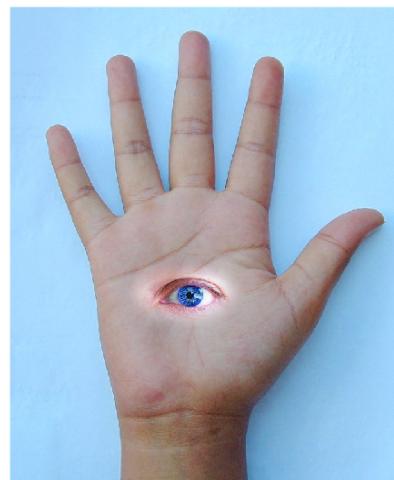
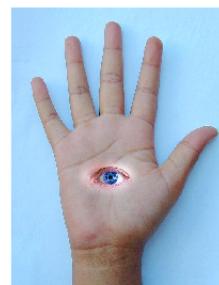
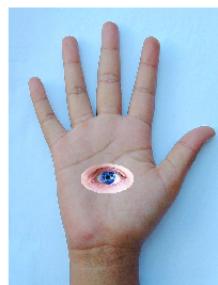
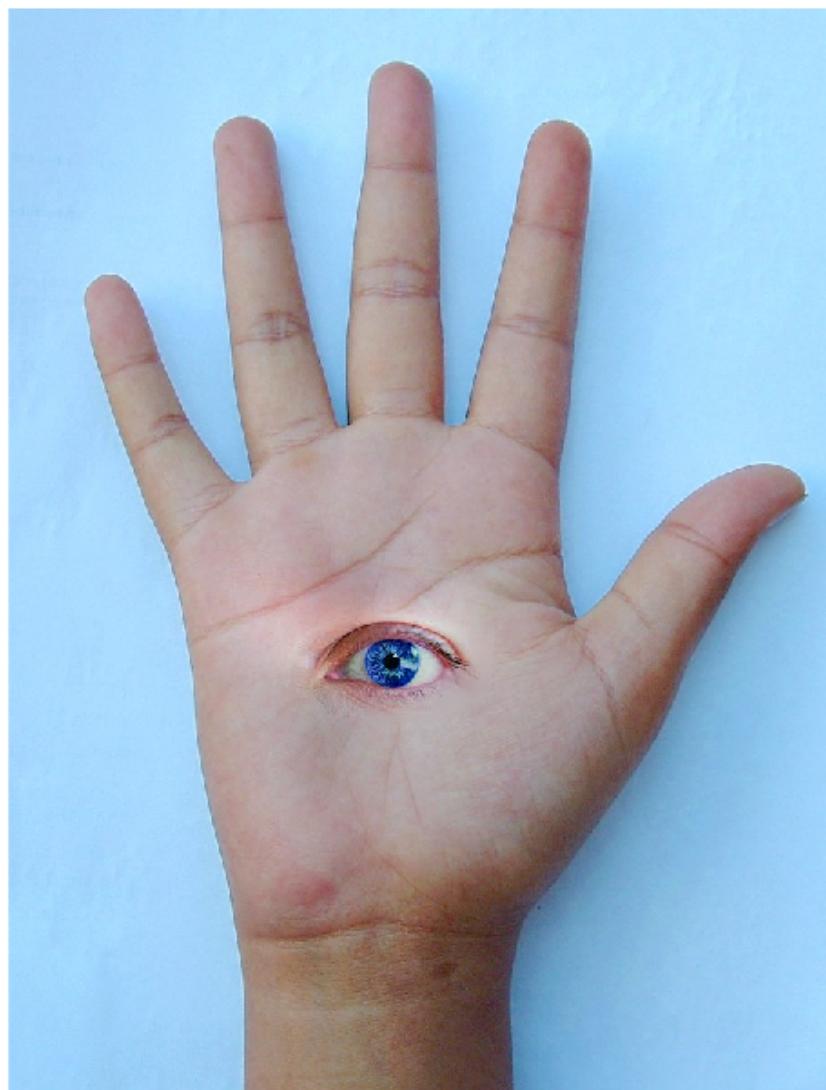


Figure 1.1



In order to improve the aliasing, which was the unmatching color around the eye region, the parameter Level was changed to 100. That made the gaussian blur around the edges of the mask a lot smoother and therefore the image of the eye seemed to blend more naturally with the hand. The result is shown in the Figure 1.3.

Figure 1.3



For the compositing of the sun in the night sky using 2 different photos (Part I a), the Figure 1.4 and 1.5 were used and the final result is the Figure 1.6. It is very noticeable the blur around the image, and the bleeding of a yellow color, since it is very hard to do a mask for the sun.

Figure 1.4



Figure 1.5

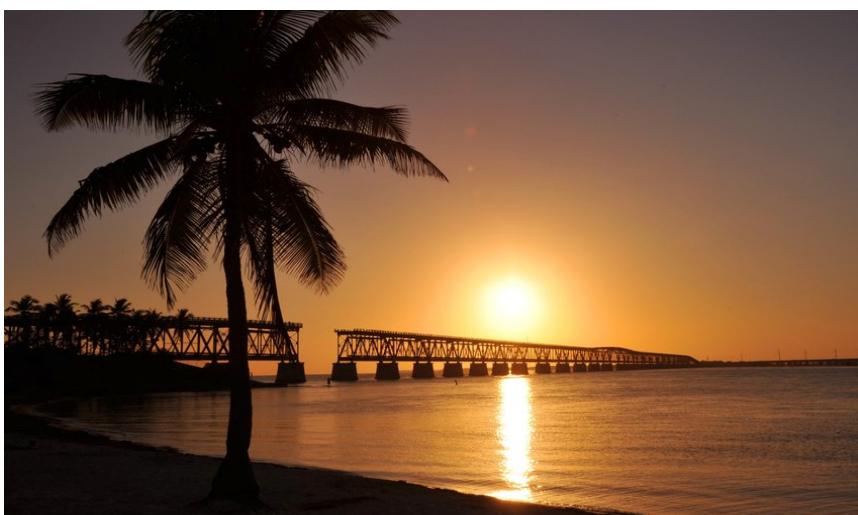


Figure 1.6



For the compositing of the daylight images (Part I b), the Figure 1.7 and 1.8 were composited and the result is the Figure 1.9.

Figure 1.7

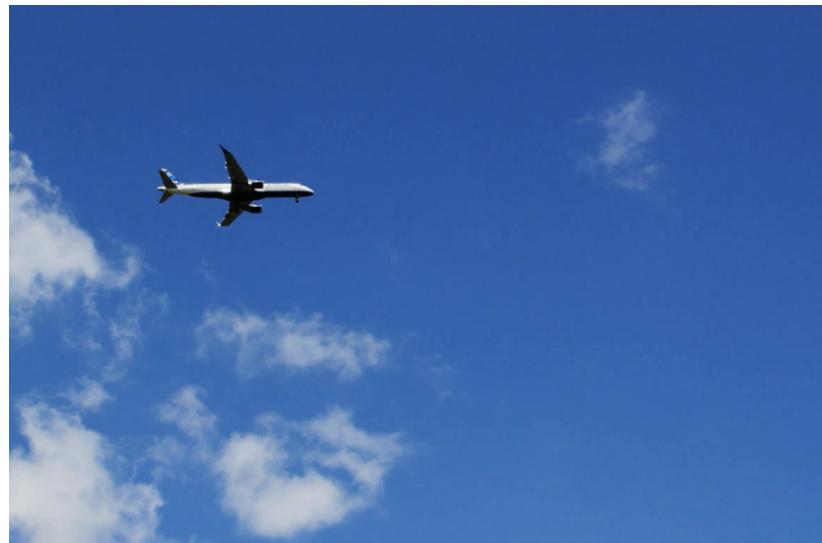


Figure 1.8



Figure 1.9



And also for the compositing of the night photographs, the figure 1.10 was composited with the figure 1.11 and the result was the figure 1.12.

Figure 1.10



Figure 1.11



Dmitry Shmelyov

Figure 1.12



Dmitry Shmelyov

For the Part II of the assignment, the images 'GT04\_alpha.png' was used to composite the image 'GT04.png' into the image background.png. For that a blend was made between the background and foreground using the values of the mask, where 0 (black) was 100% background and 255 (white) was 100% foreground, while values in between were a mix between foreground and background. The result is shown in the Figure 2.0.

Figure 2.0



In the Figure 2.0 we can see a little color bleed in the pink hair of the left puppet. In order to fix this issue, the color in the green channel for the background must be filtered while preserving the overall color of the foreground. For that a more sofisticated search algorithm that samples both known foreground and background could be applied to filter the bleeding.

For the next part of the assignment, a photo of New York city was composed as the background for the image of the two puppets, also using the provided alpha mask in order to achieve the results in the same way. The result is shown in the Figure 2.1.

Figure 2.1



The final image was composed using the same technique of the alpha matte, but also the image was translated and scaled down in order to fit the frame in the background. The result is shown in the Figure 2.2.

Figure 2.2

