Computational Photography Assignment #10 Photos of Space

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Describe the Sites you chose

Note: These sites should be different! Descriptions are about the physical site and why it is appropriate.

Site 1: Photosynth
        Location: Planet Granite, rock climbing gym
        Description: My photosynth features a bouldering section of one of the walls at my local climbing gym. I picked this site as I wanted to bring out the 3-Dness of the wall with its varying planes and colours.
Site 2: Panorama
        Location: Bowers park
        Description: My panorama is of the small gathering area of a local park. I picked this for my scene because I was curious if Microsoft Photosynth can put it together despite being mostly grass and trees. And to be entirely honest, my original idea was a pano of Yosemite valley, but that didn't pan-out (ha!) correctly.
Additional Sites (OPTIONAL)
   Location: Bowers park
        Description: I also decided to capture a walk of the same park, but I didn't feel it was upto par to submit as my main artifact.

Site 1: Photosynth

1) How many pictures did you take in total? **65**

2) How many pictures are used in your final photosynth? **58**

3) Share a few representative ones here (5-10 images).
   https://www.dropbox.com/sh/95lg137aybktm6i/AACIvXssZ1_gAdurZtVxk-S8a?dl=0

4) What type of synth is this? **Wall synth.** This is because I held the camera (to my best) at 90° to the direction of motion of the camera, i.e. by sliding across the scene.

5) This took a lot of effort due to synth difficulties and camera difficulties. I found out the hard way that my camera, Canon S95, corrupts images stored if you shoot in continuous mode for any length of time. I had lost a lot of planned takes this way (especially the walk through the wntire gym :/) and made it hard to consolidate with what I had remaining. Since the gym was open at the time I captured the pictures, people moving about also caused some synth issues.

Site 1: Photosynth

Important Note - **The quality of your photosynth will be taken into consideration during grading.**
Feel free to share failed attempts and discuss what you changed in order to get a good photosynth
 Share a screenshot of the photosynth. Replace the example below with your own.

https://photosynth.net/preview/view/a1611419-f740-4ab1-ba82-520f72786ca4
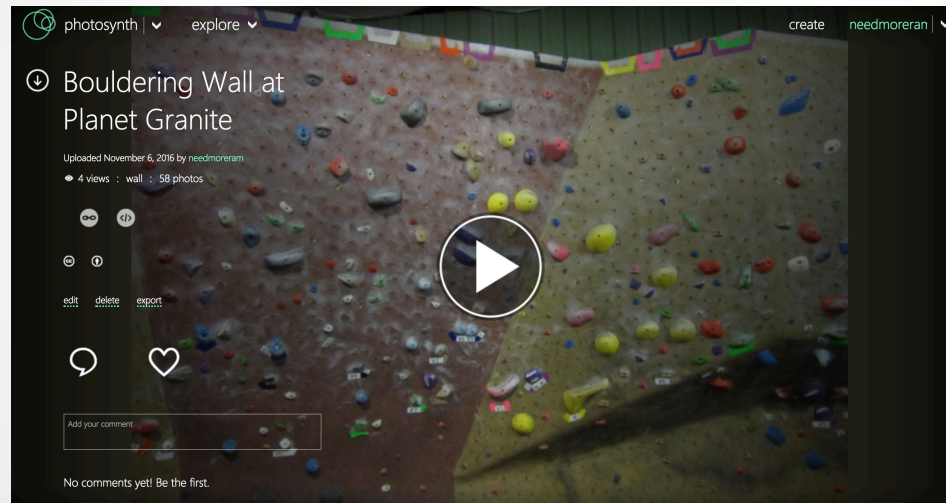
Site 2: Panorama

1) How many photographs did you take for your final panorama? **76**

2) How much of a FOV change was this (in degrees)? **360°**

3) What kind of a Panorama is this? Explain your answer.
   Cylindrical. Because I panned the camera around the scene using me as the axis of rotation.

4) What software did you use to create your panorama?

For this, I used both Hugin and Photosynth and to my surprise both stitched the images perfectly and seamlessly! I had thought the amount of grass and featureless trees would hurt the quality of the final artifact. Photosynth has the added advantage of actually viewing the pano in a cylinder and the animation also brings out the 3-D a smidge.

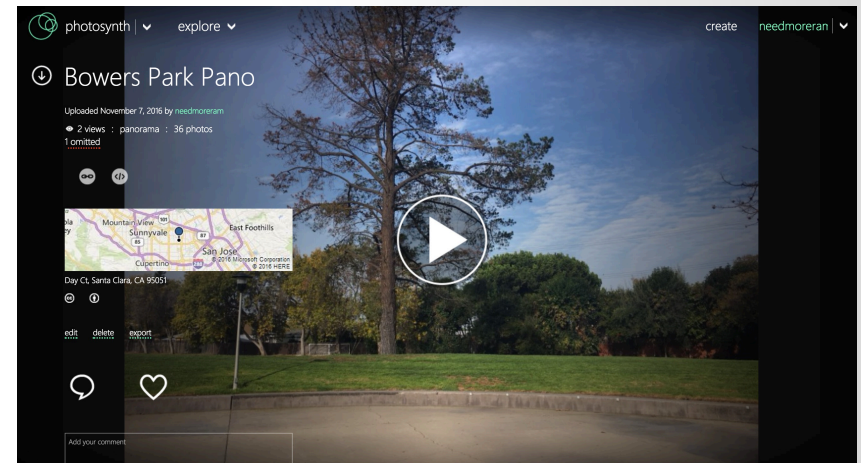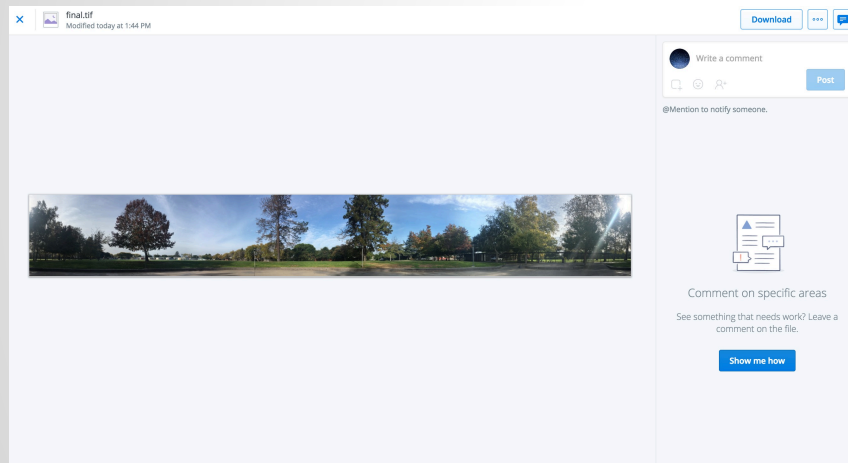# Site 2: Panorama

5) Share selected images of your panorama

     Include all input images if less than 10. These may be thumbnails.

https://www.dropbox.com/sh/lrhitqkc5l6rvi8/AACJJWXTvvdeYKACxdXxKZdha?dl=0

Final Panorama

Important Notes - **The quality of your panorama is taken into consideration during grading. Feel free to share failed attempts and discuss what you changed in order to get a good photosynth.**

If your panorama is cropped, also share an un-cropped version on the next page.
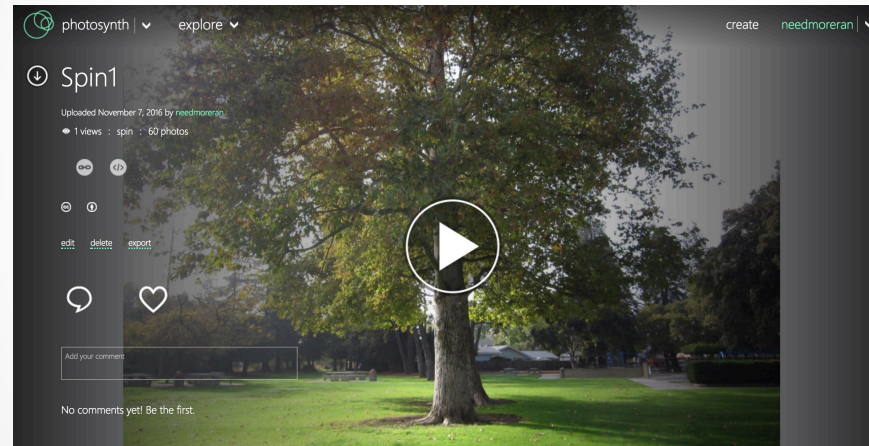

Hugin: https://dl.dropboxusercontent.com/u/14887563/final.tif
Photosnyth: https://photosynth.net/preview/view/6a80bcca-f4cc-4fde-8df8-71121cd928ed

Failed attempts

1. This is a failed attempt at a spin synth at Bowers park.

https://photosynth.net/preview/view/2680d8cd-75e9-4e9f-827d-925b75ad047c

Failed attempts

2. This is a failed attempt at a walk synth at Bowers park.

https://photosynth.net/preview/view/387ad364-1492-4b3f-84c2-1a1c19a3b5e2
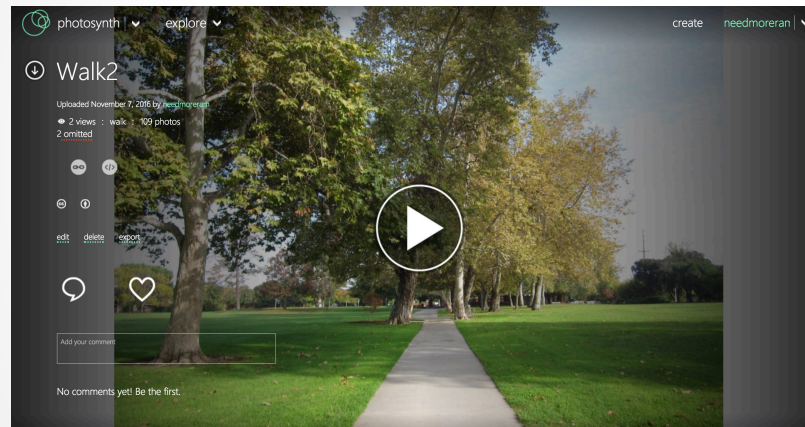
Failed attempts (contd..)

1. This attempt generated a lot of artefacts in the animation and that is quite understandable due to the relatively repetitive nature of the features in the images, namely the trunk and the leaves.

2. This attempt was not too bad but you could still see some artefacts, especially towards the edges and I suspect this is due to the constant nature of the concrete walkway.

Resources

Micorosft Photosynth
Hugin Panorama Photo Stitcher