

# **Computational Photography**

## **Assignment #10**

### **Photos of Space**

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Fall 2016

# Important Note Before Moving On

Assignment 10 does not have a coding portion. Your entire assignment grade will be based on your report. We will be looking for detailed descriptions of the sites, excellent presentation of your photosynths and panoramas, and well thought out answers to the questions. Answers should be in complete sentences. Make sure to expand upon your answers where needed.

Students: Start this assignment early because it requires planning and takes time, especially for the photosynth portion. If your photosynth comes out unsmooth and choppy/jumpy, we highly advise that you do not submit it as your final attempt because you will not be happy with the additional deductions in your grade. Quality is important for both the photosynth and the panorama!

# Describe the Sites you chose

## Site 1: Photosynth

Location: a red bridge in Vasona Park in south bay area, California

Description: This is a park located at Los gatos in south bay area. There is a red bridge in the center Of the park with a water stream flowing down to the Vasona Lake. I took the pictures while walking on the bridge, the red paint makes it good for feature match. The light condition is awesome with a little cloud, and I took these pictures without a camera stand.

## Site 2: Panorama

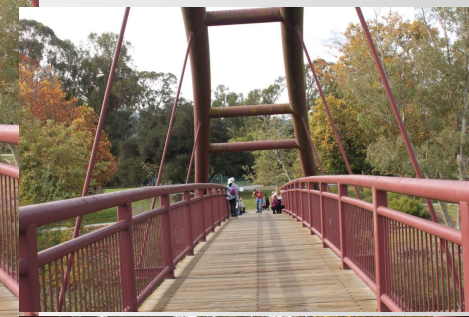
Location: Vasona Lake

Description: This is a sideview of Vasona Lake, I stood at one point and turning my shooting angle over the lake. The lake is peaceful under the sun shine, and it is reflecting images as a mirror. Since there were no moving objects, it is good for a static panorama.

# Site 1: Photosynth

- 1) How many pictures did you take in total? >100
- 2) How many pictures are used in your final photosynth? 45
- 3) Share a few representative ones here (5-10 images). Create additional slides if necessary. In addition to sharing sample images in this report, you can upload all the images you used in your photosynth to an online folder and provide a shared working link here (sharing must work for anyone who has the link). See next page.
- 4) What type of synth is this? Explain. It is walk. I just walk a step, stop for a shot, and walk again, until my shots cover the whole bridge.
- 5) Discuss your experience. What did you do to make this work? I try to create clean shots, but there are always people walking on the bridge. So I just wait at a position until my front view is clear and take the next shot.

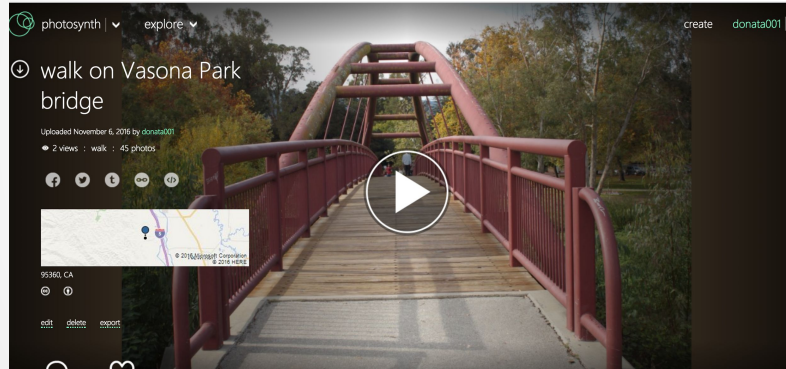




# Site 1: Photosynth

**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.



- Share a URL/Weblink to the Photosynth (Make sure it is viewable by anyone! Test this before submitting).

<https://photosynth.net/preview/view/367a0683-0e53-494d-9960-69e81f08b3c2>



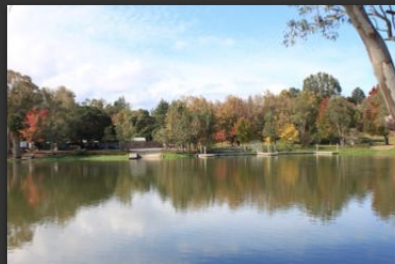
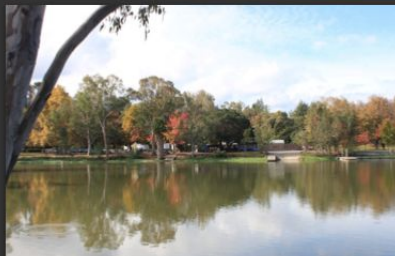
## Site 2: Panorama

- 1) How many photographs did you take for your final panorama? 19
- 2) How much of a FOV change was this (in degrees)? 170
  - a) FOV is the included angle from one edge of your final panorama image to the other edge, with the camera at the vertex.
- 3) What kind of a Panorama is this? Explain your answer.
  - a) (i.e. planar, cylindrical, etc) cylindrical, the surrounding is evenly

Shooted as images while I'm fixing my position.

- 4) What software did you use to create your panorama? Discuss your experience, what were the software strengths, weaknesses.

I used photo Sticher, professional app for Mac for free, no water marker, very quick to install and use, completely automated and optimized, amazing feature match and image blend. Weakness is only 20 times without water marker.



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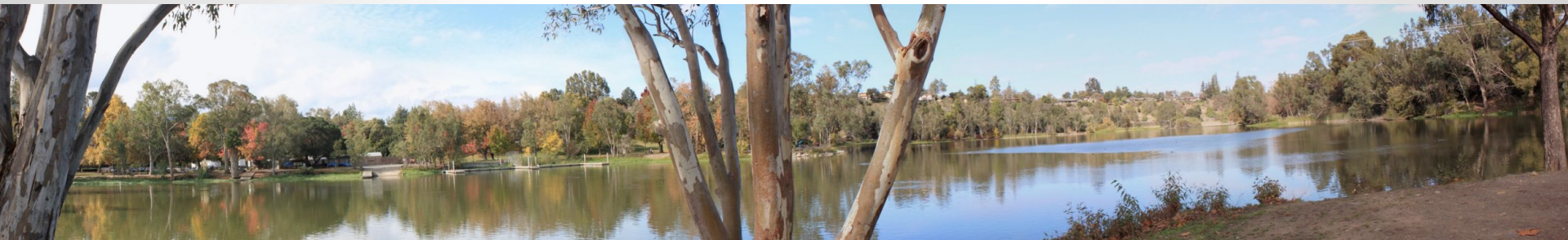


thumb\_IMG\_2351\_1024.jpg  
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# Final Panorama

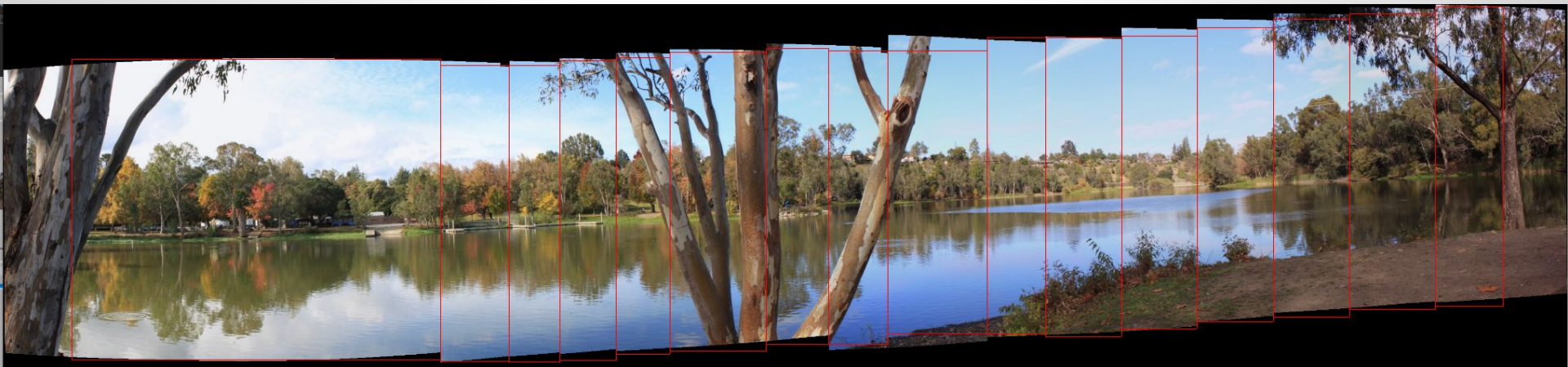
**Important Notes** - The quality of your panorama is taken into consideration during grading. Feel free to share failed attempts and discuss what you changed in order to get a good photosynth.

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



<https://goo.gl/photos/WZuJtwSidK99XgsV7>

Host the final panorama image (you can use Google Drive and share the link, or upload it to Dropbox, Imgur, etc.) . Add a working link here so we can see a better resolution image. Sharing must be set to anyone who has the link for grading purposes.



Uncropped result

# Add more details

- Tried photosynth, the result is also pretty good, but I'm not able to download it as a mac user. Also tried autopano, not very good user experience, and it has tons of water mark. I took two panorama sites, with one with 19 pictures and another with 6 images, 19 pictures stitch result is awesome.
- What would you do differently?

I would like to do a 360 panorama next time as the result is very good.

Use additional slides if necessary



# Resources

Include technical resources that you relied on.

- Stack overflow
- Websites
- technical papers
- Significant Piazza posts

Our class lectures do not have to be referenced.

*Remember: It's plagiarism if you don't reference it!*

# Above & Beyond

- [See the 90% rule](#) - Refer to the A10 instructions for potential ideas to get you started.
  - *This section is optional. It is more important to do well on the basic assignment first.*
  - *Include images, research, what you learned.*
  - *Do not just demonstrate another example similar to your first one, do something different.*
  - *Technical discussion is critical for high grades.*
  - *Include your references on the Resource page.*
  - *Use as many pages as necessary.*