Georgia Tech's Computational Photography Class Portfolio

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Assignment #1: A Photograph is a Photograph

"There is a light at the end of every tunnel."

Zion National Park, Utah

Assignment #2: Basic methods

convertToBlackAndWhite

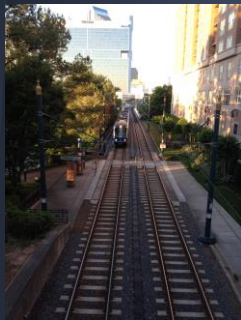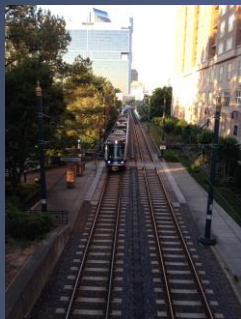Original Image

flipHorizontal

Original Image + Second Image = averageTwoImages

Assignment #3: Epsilon Photography
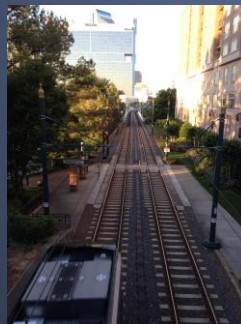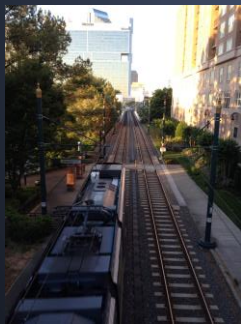

1

2

3

4

Link to Output -
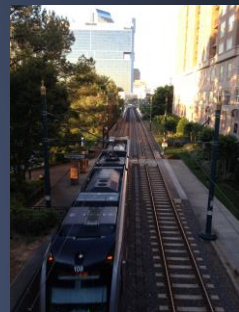https://drive.google.com/file/d/0Bxf58oxTXbZuWnVHOF
9XSkIPT1k/view?usp=sharing
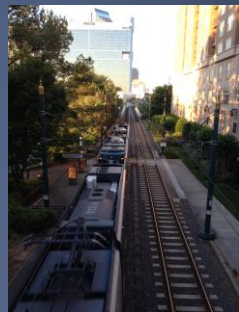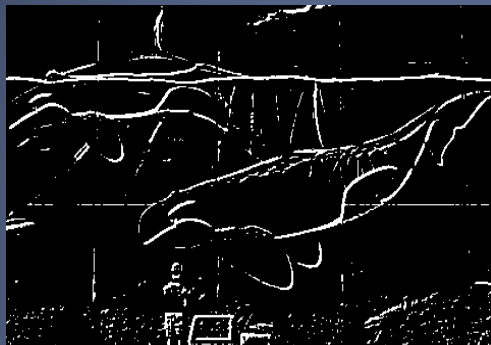
Assignment #4: Gradients and Edges

Edge Detection
using Prewitt Kernel

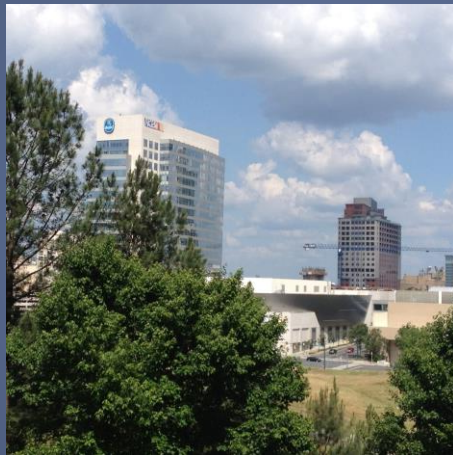Edge Detection
using Sobel Kernel

Original Image

Assignment #5: Camera Obscura

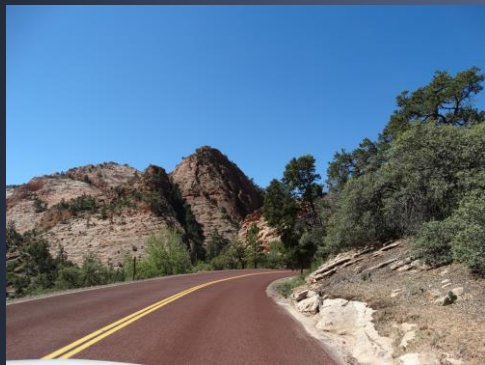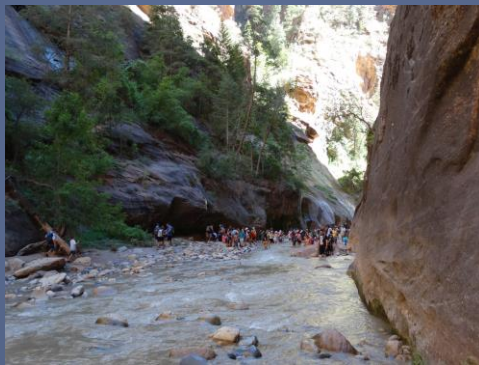Resulting Image

Actual Image

Setup Used

Assignment #6: Blending

Black Image   +   White Image   =   Output Image

Assignment #7: Feature Detection

sample

lighting

scale

rotation
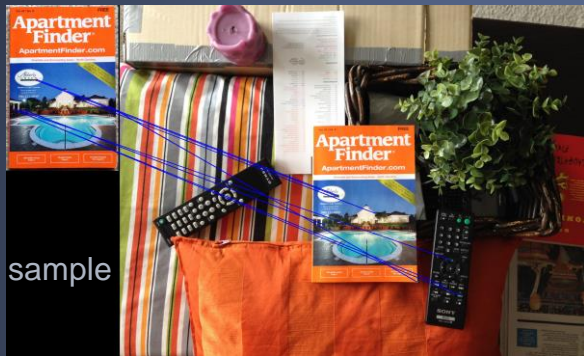
Assignment #8: Panoramas

Output Panorama

Assignment #9: HDR - Input

Image file	Exposure value	Shutter speed	Type
High Five – ppw – 00.tif	+3 EV	1/8s	artificial (created form +2 EV exposure)
High Five – ppw – 01.tif	+2 EV	1/15s	original
High Five – ppw – 02.tif	+1 EV	1/30s	original
High Five – ppw – 03.tif	0 EV	1/60s	original
High Five – ppw – 04.tif	-1 EV	1/125s	original
High Five – ppw – 05.tif	-2 EV	1/250s	original

Assignment #9: HDR - Output

Assignment #10: Pictures of Space 1

Panorama - 3 Pictures stitched together with Image Composite Editor

Assignment #9: Pictures of Space (2)

Art Wall - Photosynth

URL to the Photosynth –
https://photosynth.net/preview/view/fff88f3a-a1b3-4daa-ae47-ec19823558c3
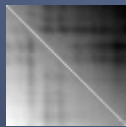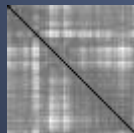
Assignment #11: Video Textures

I choose a water fountain for this assignment. I shot a video for almost 1:03 minutes. Ffmpeg generated 64 frames. When I ran the code, it gave 60 frames as output with below values for starting and ending frames:

* – 2
* End - 61

Links to GIF : *The fountain*
https://drive.google.com/file/d/0Bxf58oxTXbZuMGQiLUpLUE0FUzQ/view?usp=sharing

Difference Matrices are:

Final Project – Hidden watermark

A tool that allows the owner to watermark the images with digital signatures to prove ownership of images.

(Quick Demo:https://youtu.be/eZ2ggalugMc)

Fun Class!

This was a fun class. Finally, I know all the features of my camera. After taking this class, I have a newfound appreciation for the scenery around me.