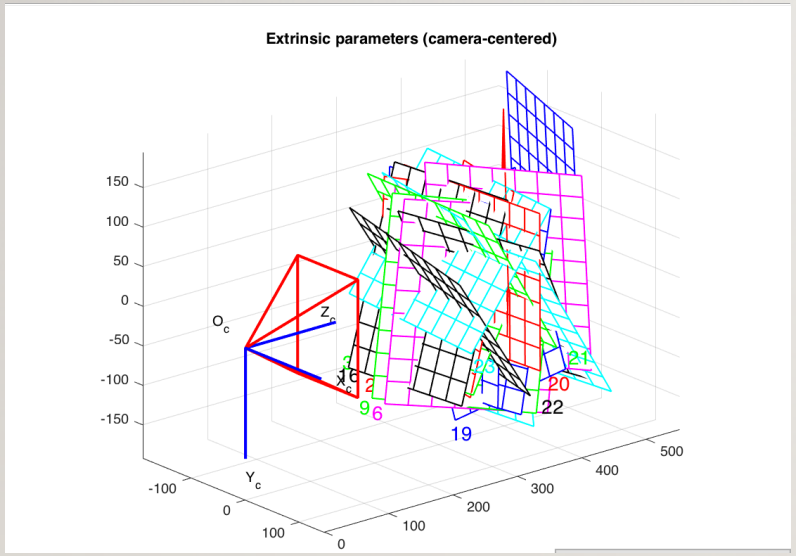
EECE 5698: LAB 4 PHOTO MOSAIC

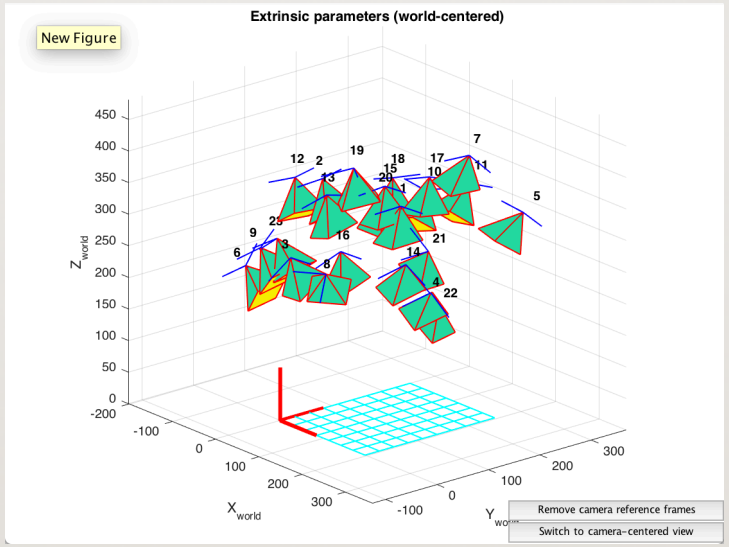
ANDREW TU

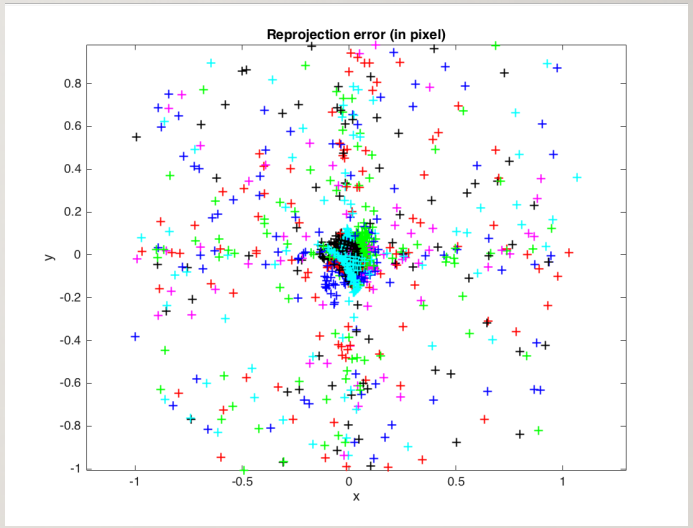
CALIBRATION

- Calibrated using 23 images of the checker board
- Window size of 1px
- Focal Length: fc = [3798.09831 3786.69369] ± [0.84810 0.86363]
- Principal point: cc = [1913.48815 1754.93413] ± [1.01761 1.08005]
- Skew: alpha_c = [0.00000] ± [0.00000] => angle of pixel axes = 90.00000 ± 0.00000 degrees
- Distortion: kc = [0.00765 -0.08426 -0.00826 0.00672 0.00000] ± [0.00074 0.00209 0.00009 0.00009 0.00000]
- Pixel error: err = [0.24405 0.24795]

CALIBRATION





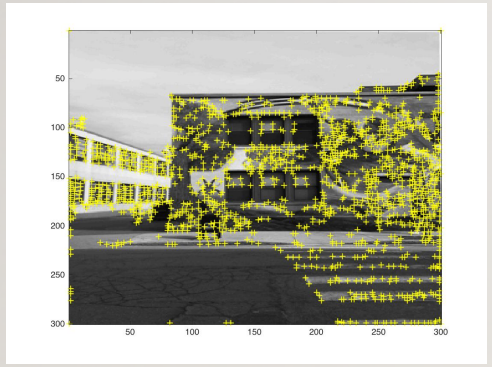
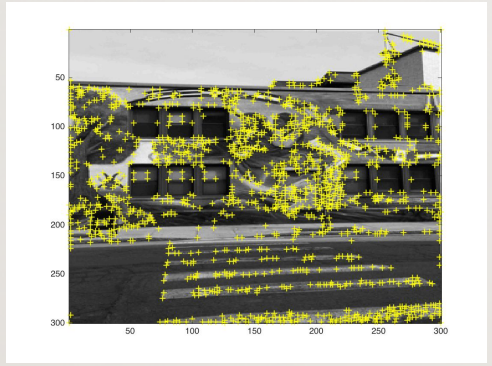
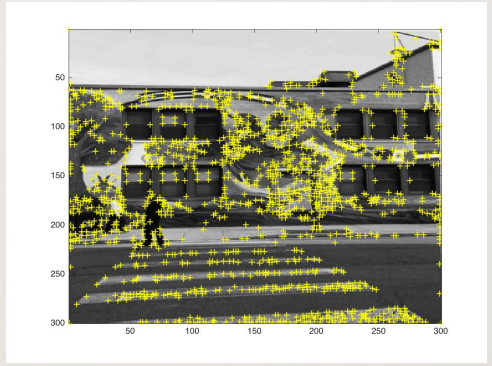
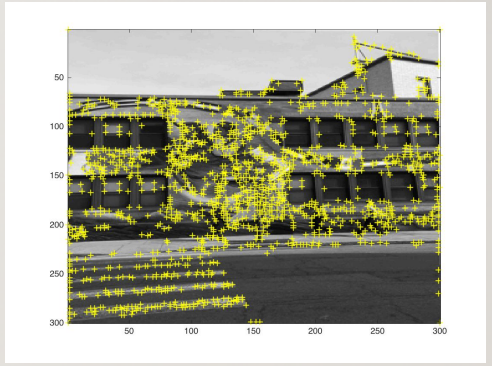


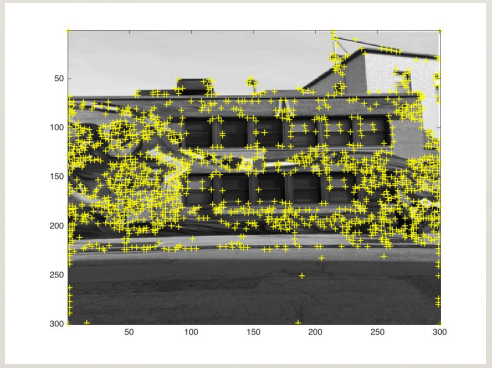
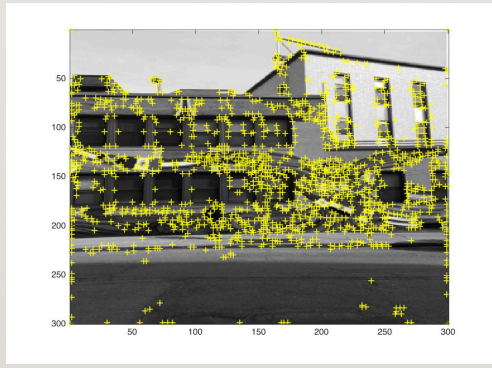
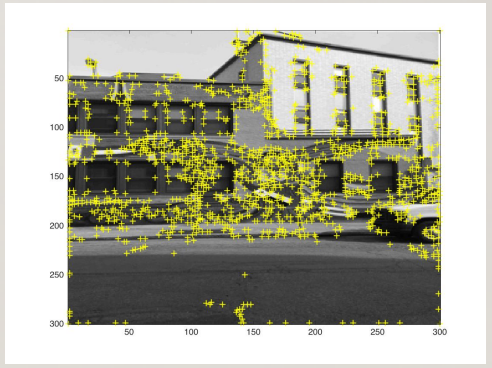
FEATURE DETECTION SETTING SUMMARY

- Down sampled images to 300px X 300px
- 1500 points taken
- Broke images up into 3 tiles for feature detection

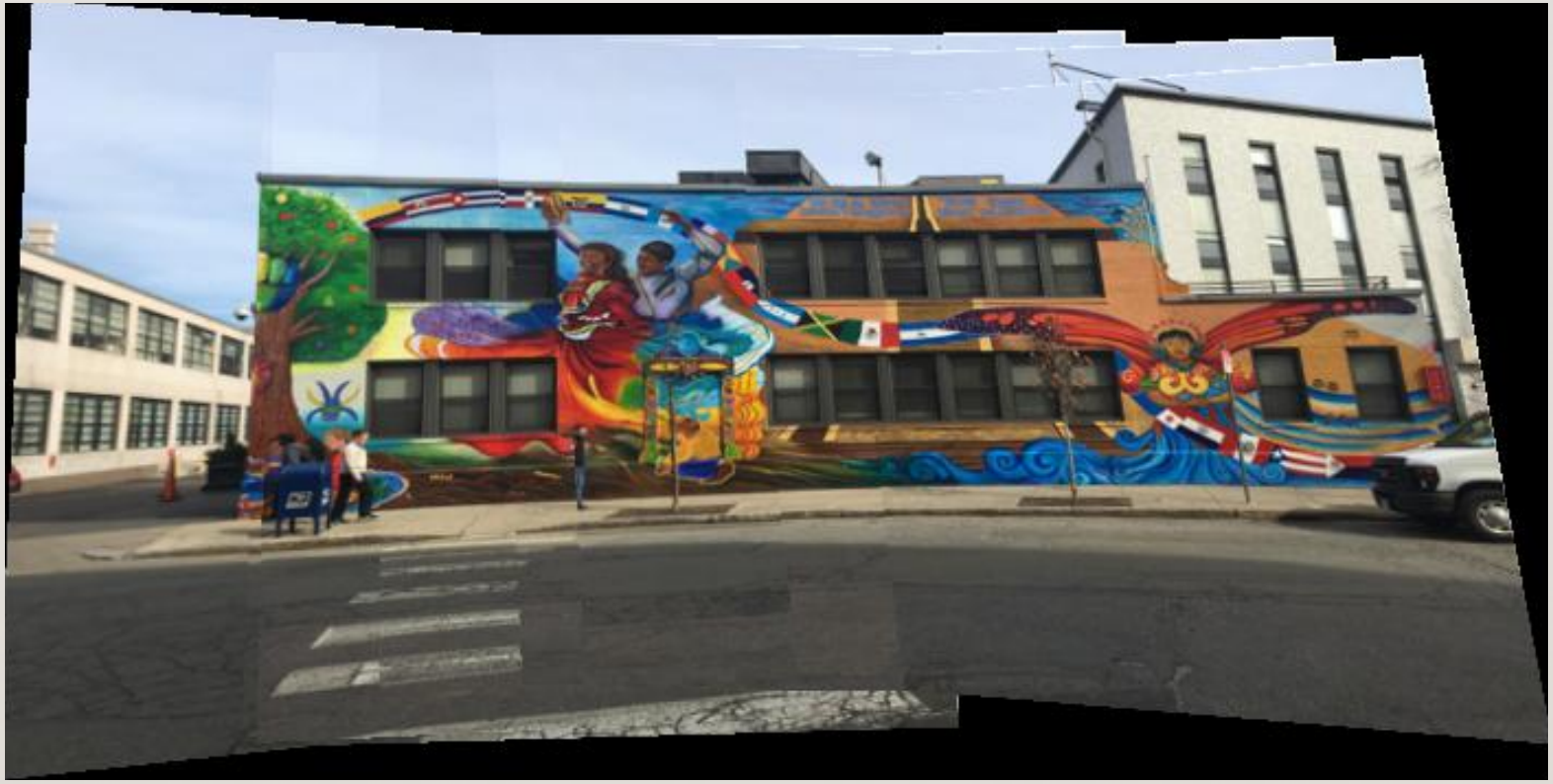
LATIN AMERICAN CENTER - MONTAGE

LATIN AMERICAN CENTER – FEATURES
(IMAGES DOWN SAMPLED TO 300PX X 300PX)

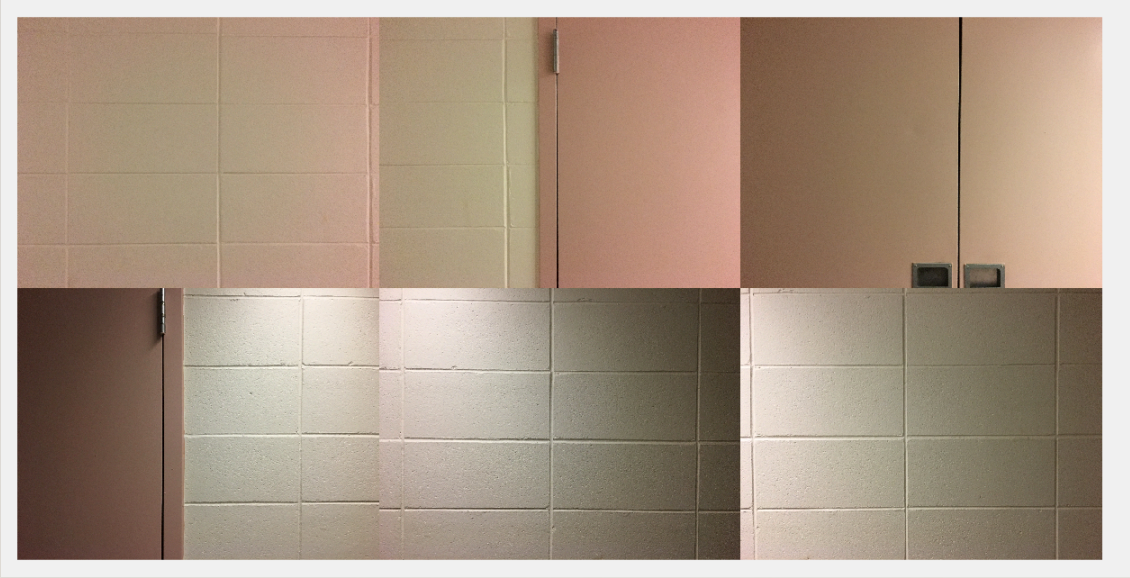





LATIN AMERICAN CENTER PANO
(IMAGES DOWN SAMPLED TO 300PX X 300PX)



CINDER BLOCK WALL: NOT ENOUGH FEATURES



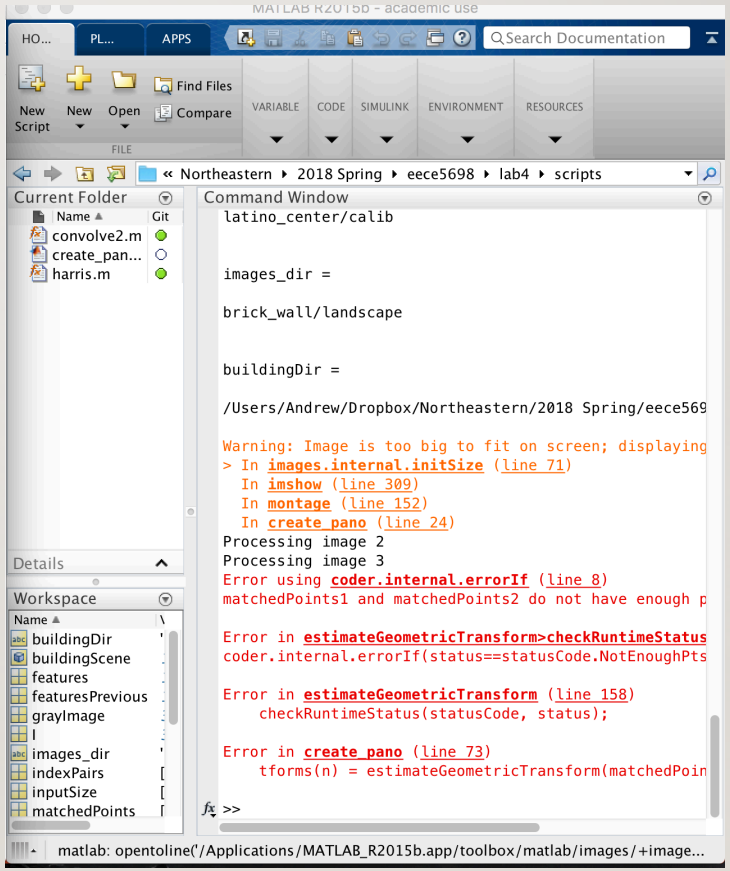
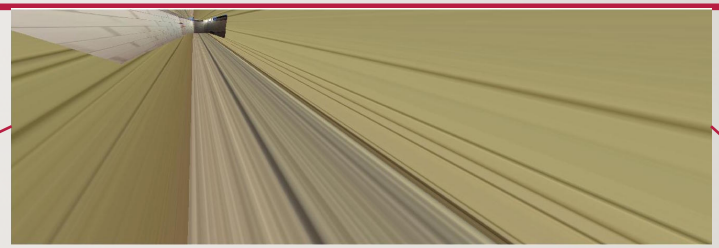


Image 3 didn't have enough features to extract, causing the code to throw an error

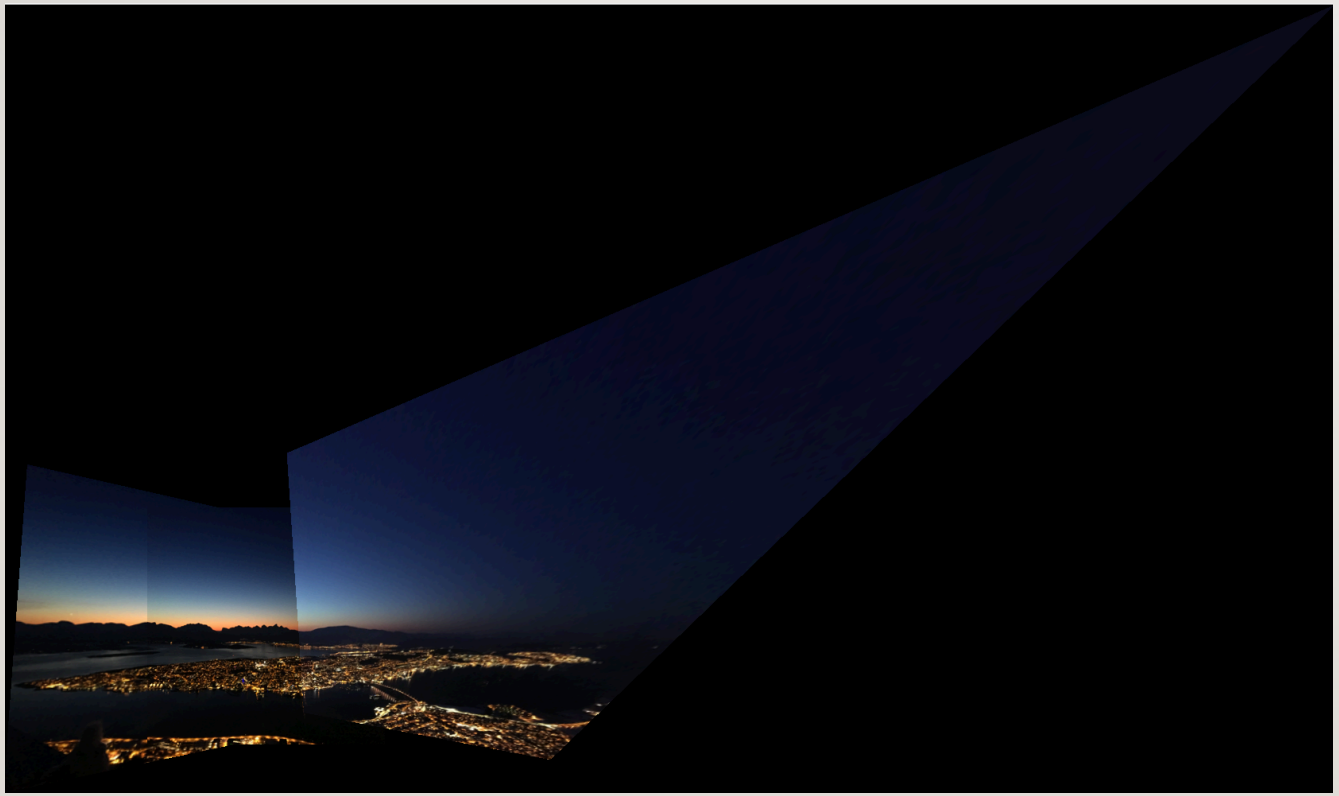
DIFFERENT CINDER BLOCK WALL
(IMAGES DOWN SAMPLED TO 300PX X 300PX)

Ran code on a cinder block wall with more distinct features

Still saw significant distortions when creating panorama



TROMSØ PANO (IN PLACE OF CAMPUS)



Played around with included images

"Goldilocks" overlap amount

- Too much overlap, crazy distortions of overall image
- Not enough overlap, script is unable to match enough points