

CMPT 361 - Homework 2

Name: **Daniel Todd**

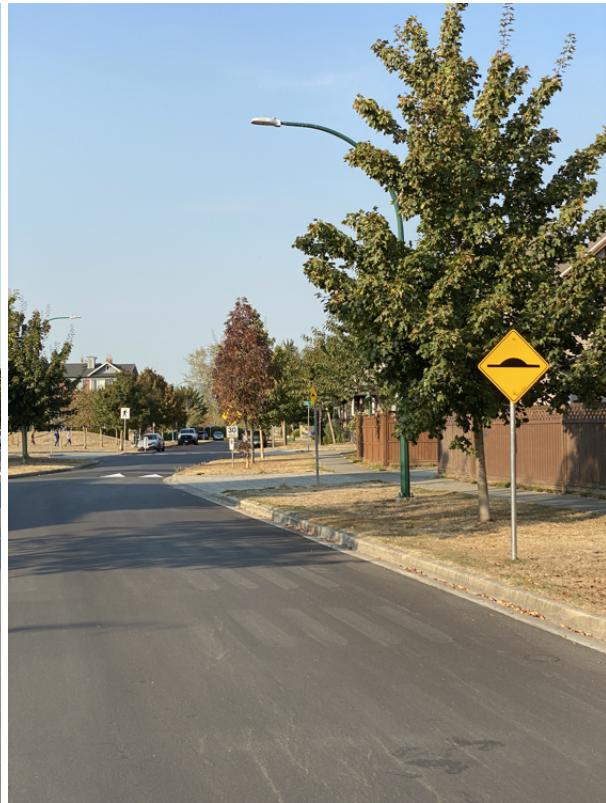
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Date: 10/16/2022

Honor statement:

I have not cheated in any way when doing this assignment, I did it on my own. I may have asked questions about the assignment on Piazza, I know that's totally fine and even encouraged. I also already know that this class is graded on a curve. I realize that if I cheat and by some miracle not get caught, any increase in my grade will in turn shift the curve and result in lower grades for my classmates. Any undeserved extra grade would come at the cost of all others. That's horrible! I would never do it.

1: Take four photograph pairs or sets of 4.





im1 im2

2: FAST feature detector



2: FASTR feature detector



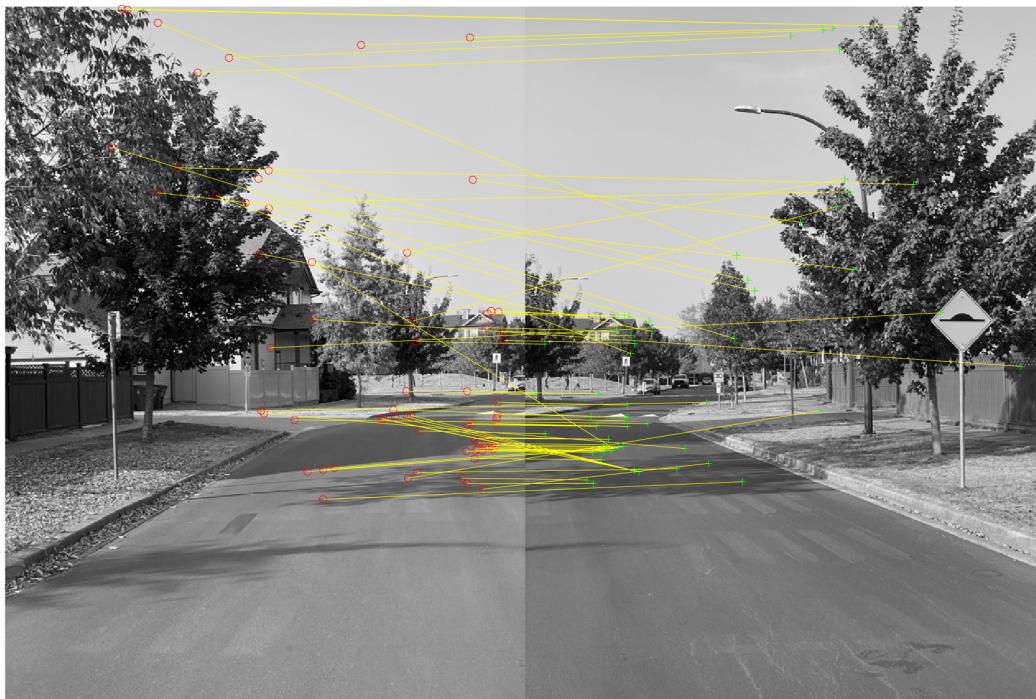
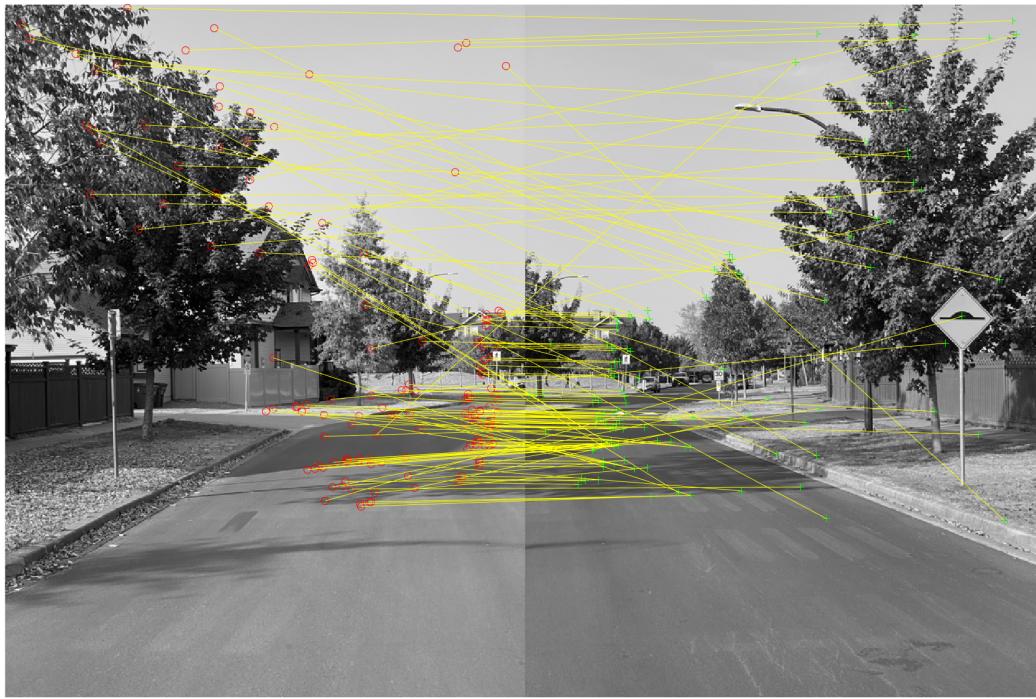
Average runtime for FAST = 3.1477 seconds

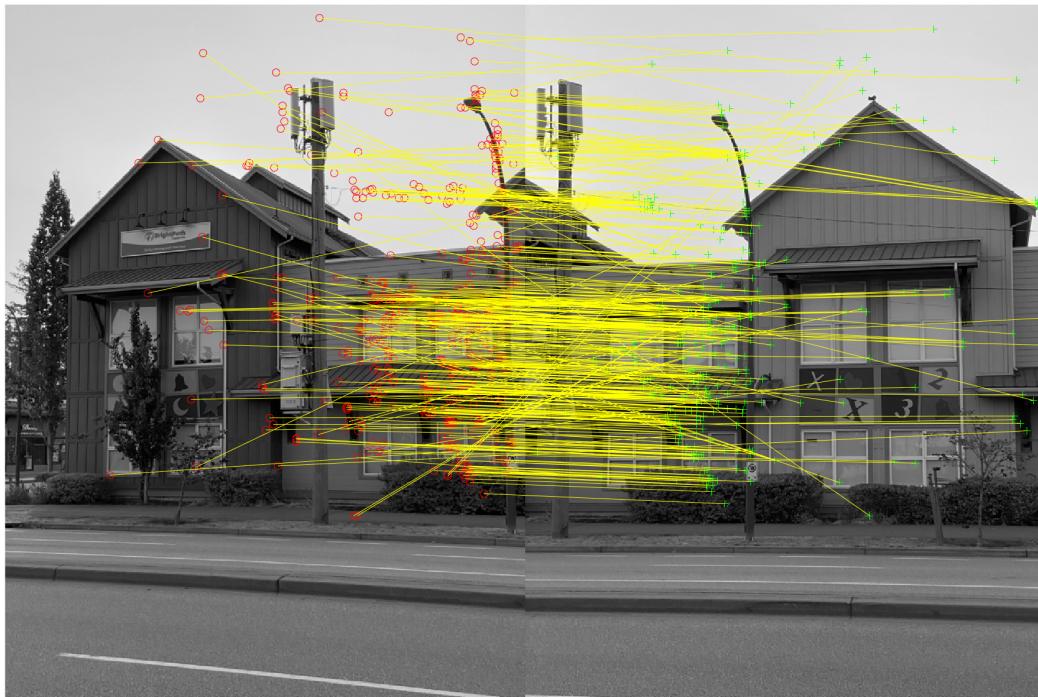
Mean difference in runtime between FAST and FASTR = 0.01843 seconds

Mean runtime of FASTR = 3.1662 seconds

The FASTR points appear to be similar to the FAST points, but with less noise(not as many redundant pixels)

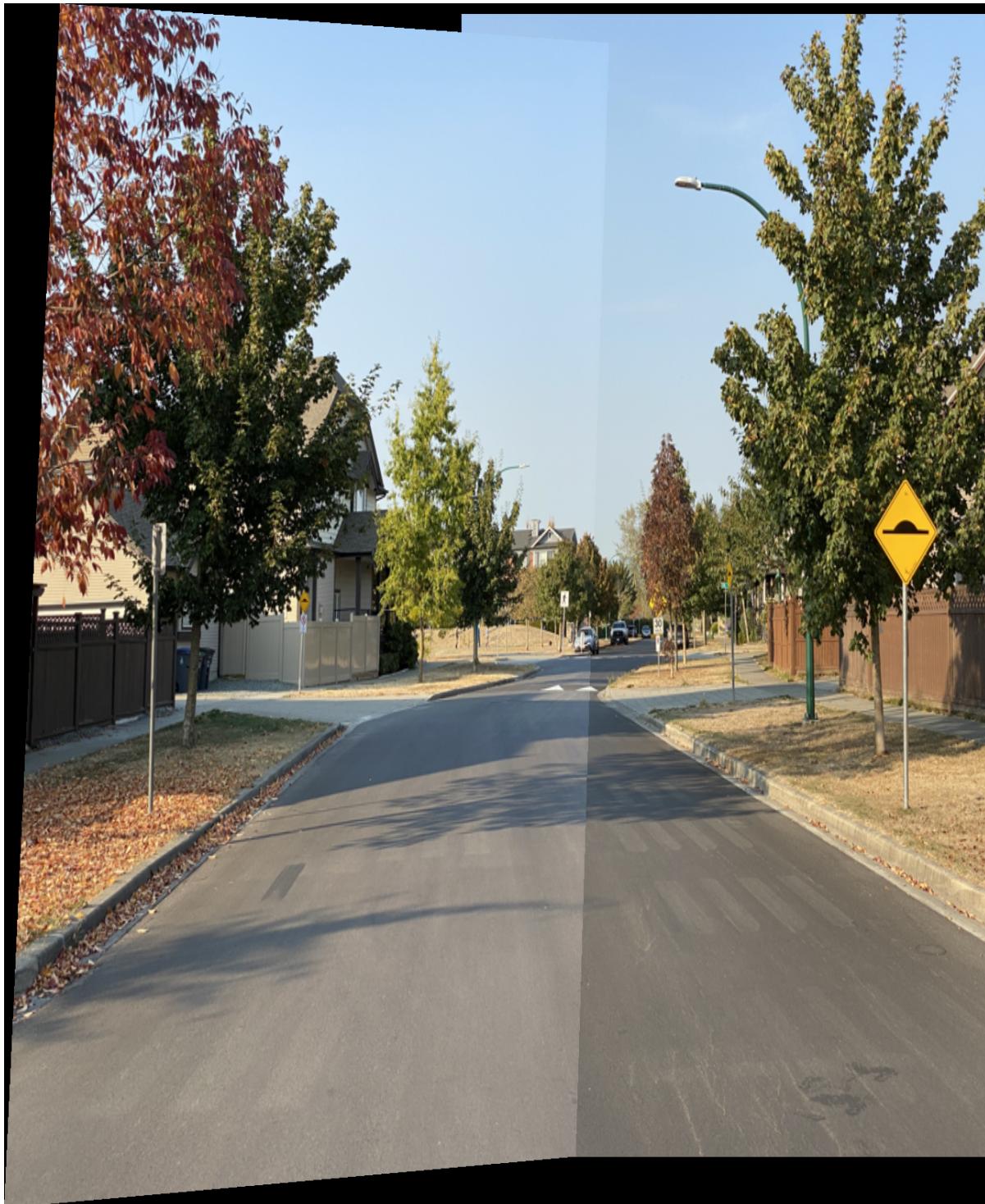
3: Point description and matching





The FASTR point matching seems to result in less matches, but not necessarily more accurate matches

4: RANSAC and Panoramas









The only notable difference between optimal RANSAC parameters for FAST and FASTR matches, is that FASTR seems to benefit from a higher MaxDistance at 30, compared to 10 for FAST.