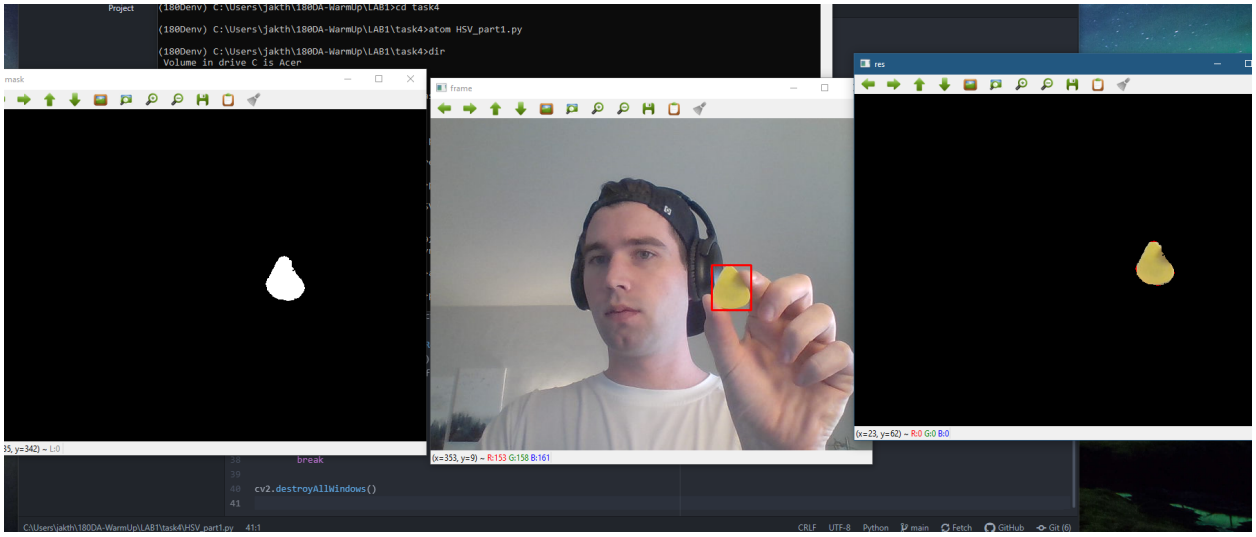
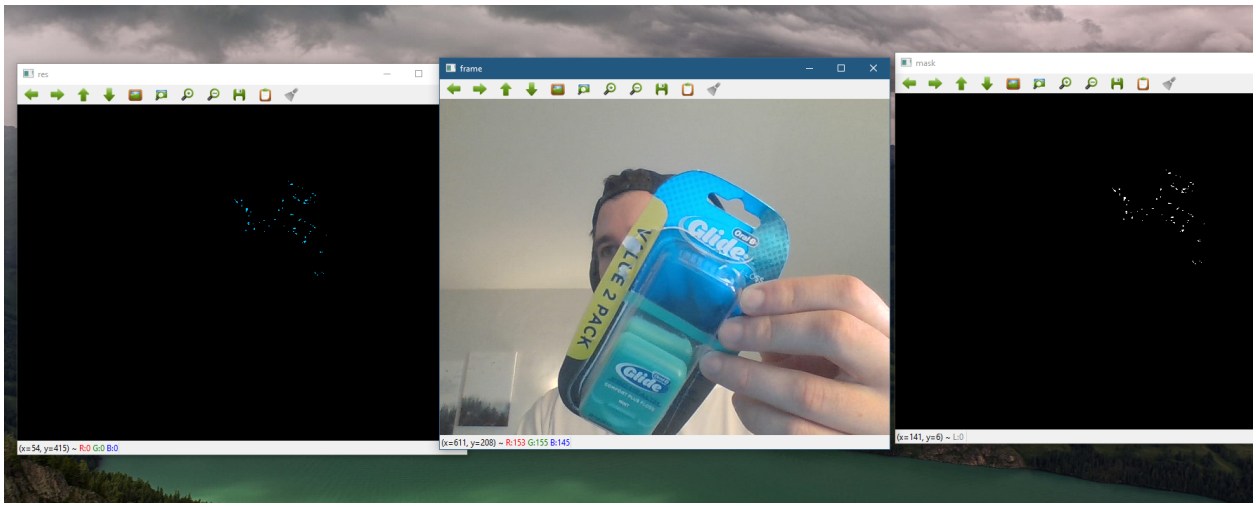
Jake Reilly 180DA – LAB 1
Tasks 1-3 completed and can be seen in github repo: www.github.com/jathrei/180DA-WarmUp

Task 4:

- Part 1:
    - HSV THRESHOLDING



    - RGB TRACKING (Could not get yellow to work, had to try blue)

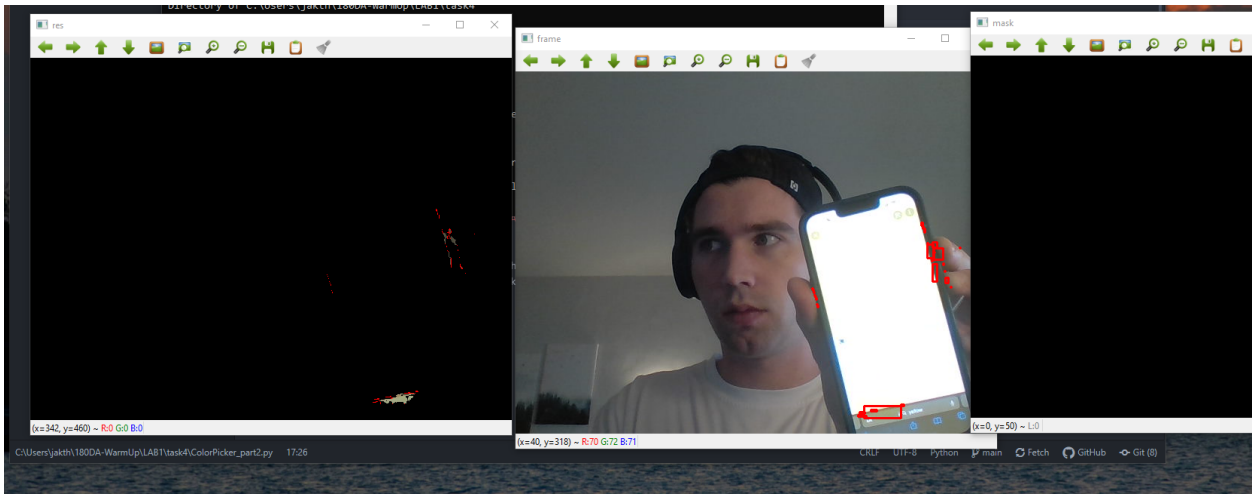


    - For me, HSV tracking was exponentially better. RGB tracking did not work at all for yellow, and for blue I got it to show up occasionally, but even then it was barely noticeable.
    - Yellow worked great with a threshold of 10 (ie: r = 10; 30-r for lower bound and 30+r for upper bound)

- Part 2: Different lighting conditions
    - In low light, I was unable to track the color using either RGB or HSV tracking

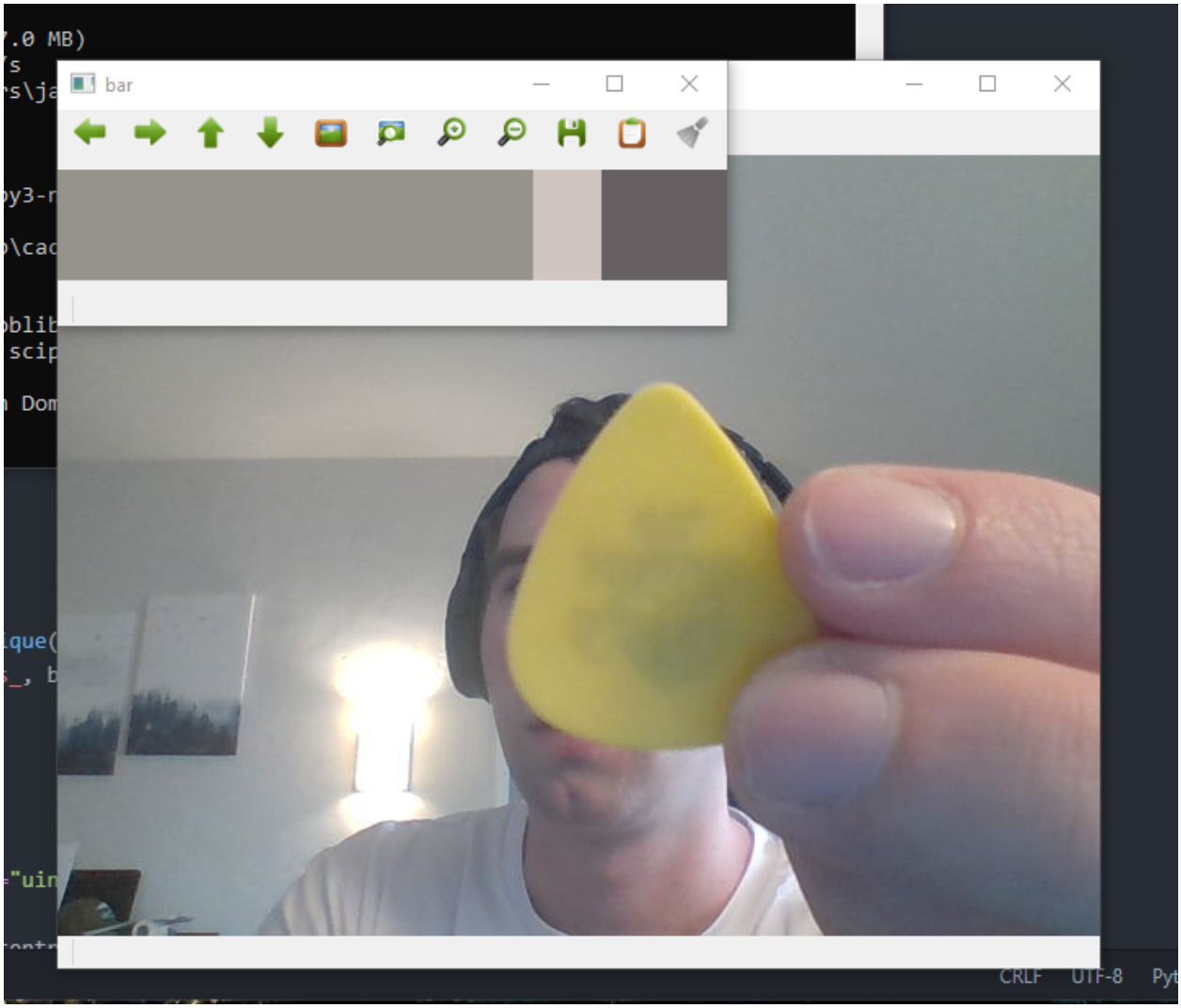
- Part3: ColorPicker
    - Lower Brightness

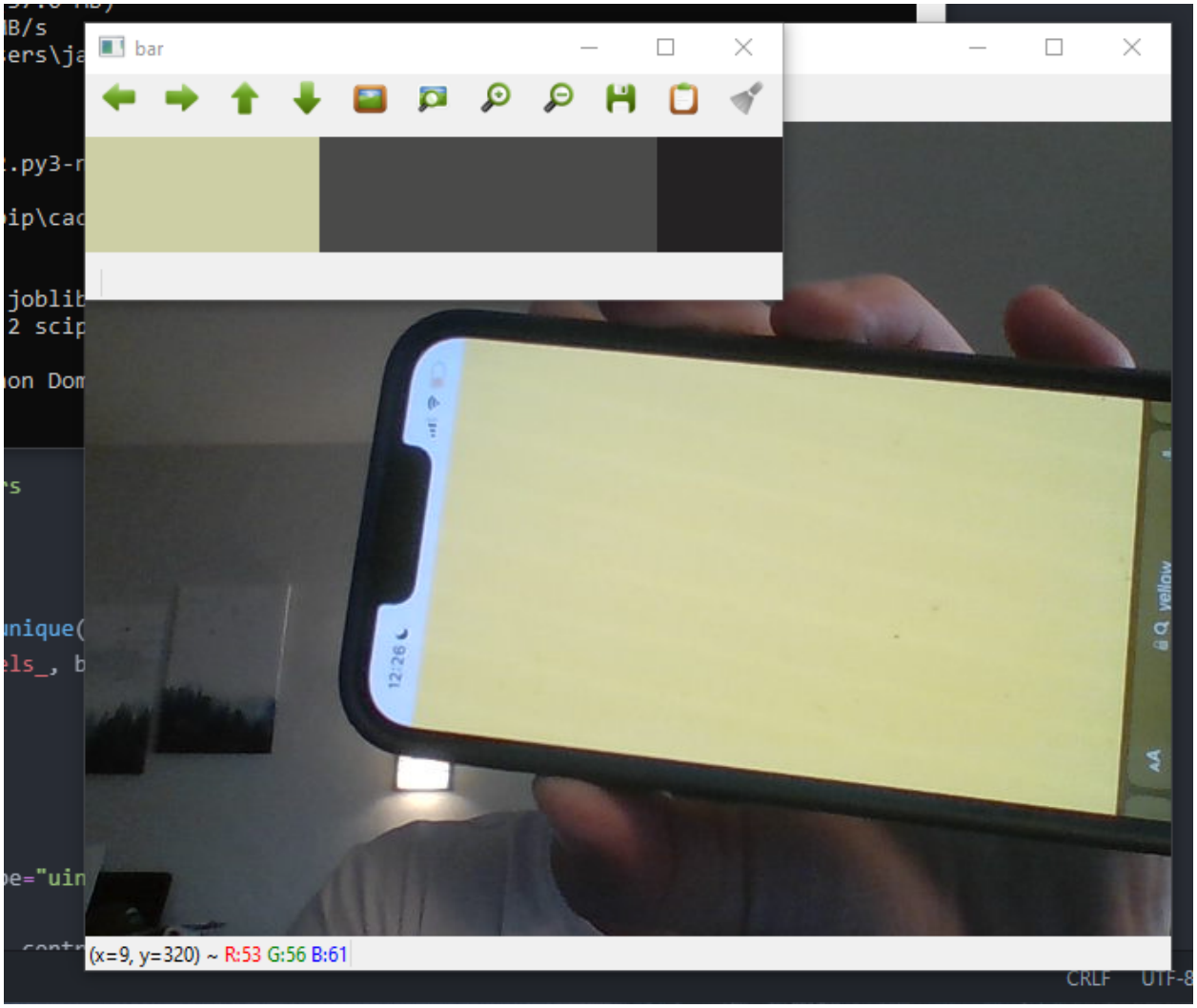
    - Higher Brightness



    - Changing phone brightness hurts the ability to track the color: under super bright conditions, the computer was unable to distinguish the color on the phone as yellow when it was to the human eye

- Part 4:





- It seems as though the Kmeans is more robots to brightness. This may have to do with how the Kmeans clusters nearby pixels, as opposed to the HSV tracking.

Lab Difficulties

Some difficulties I ran into was my computer camera. I have quite an old laptop and the resolution isn't great, which I'm sure can affect the outcome of the object tracking via color.