Mouse callback and color segmentation

The goal of this lab was to learn about mouse callbacks and to implement a simple color segmentation algorithm by hand.

Task 2:

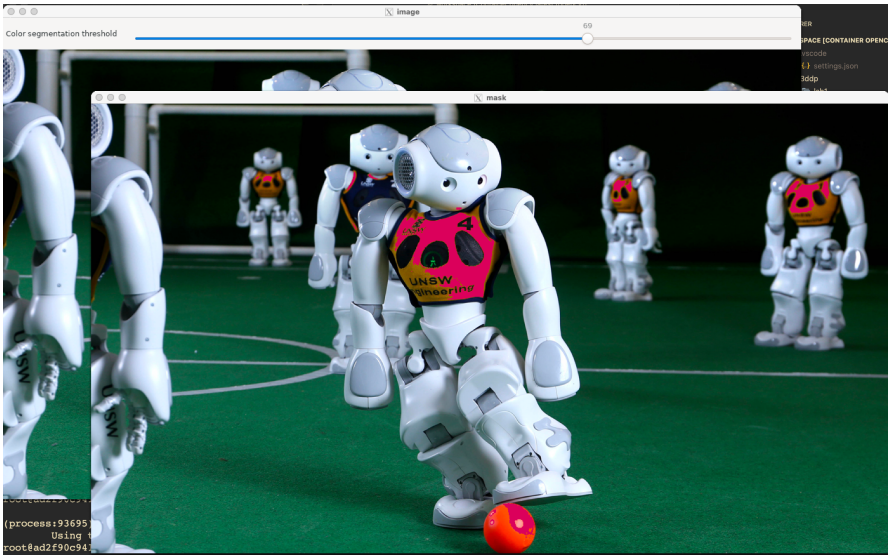
- I had a subtle bug where colors didn't match what I was clicking in the image, and I was also having segmentation faults. I understood from the debugger that I was accessing the wrong pixels, inverting the x and y coordinates in the at function. This is something that often confuses me, thinking about columns/rows vs width/height etc. The correct way to access the pixels in the mouse callback was `imgCopy.at<cv::Vec3b>(y, x); // not (x, y)`
- I was able to write text on a copy of the image with the `cv::putText` function

Task 3 takes from Task 2, with a few changes:

- we need to check that the neighboring pixels are still in the matrix
- we can compute the mean thanks to a `cv::Rect` selection of the original image

Task 4 and 5 were very interesting:

- given the reference color computed as in Task 3, find the pixels with similar color
- since a threshold is involved, and I once read that in OpenCV one can create slider trackbars over the images, I decided to try that. So I instantiated a trackbar to change the threshold and allow dynamically creating the color segmentation
- a difference with respect to the previous tasks is that in these tasks we are creating a new window and updating the image mask shown in it, rather than updating the image shown in the original window
- what follows is a screenshot from Task 5



The threshold is set to 69. The click was made in the upper portion of the shirt of the main robot. We can see that the color segmentation is not ideal. The issue is that the shirt has different colors due to the shadows and the same is true for the red ball (which shows a strong light and a deep shadow). So even varying the threshold, one can select more of the object he wants, but risks also selecting unintended objects. A possible solution would be an algorithm that also considers the locality, and continuity of the selected objects.