QArm Recommended Assessment

Visual Servoing

1. In the image processing subsystem blob detection was used to identify the centroid of the object of interest. The depth value at that location scaled the pixel coordinates into physical coordinates. What are some potential downsides of using a single point of reference for visual servoing?

2. One of the steps to selecting the depth measurements is to align the depth and RGB image feeds. Was the entire depth image valid? What are some of the considerations you should take when sampling the depth measurement using the RGB coordinate?

3. Based on the performance of your controllers, why/why not would a proportional-Derivative controller be appropriate for Visual Servoing ?

4. What did the Color Tracking Monitor show when the desired tracking distance was set to $[50 - 32\ 400]mm$.? What does this imply for tracking objects in a scene? What does this imply for picking up an object with the QArm?