https://petercorke.github.io/robotics-toolbox-python/intro.html

https://youtu.be/Kkse8uTkvUI

Also Sami Haddadin is the master mind behind our Franka robot

https://www.youtube.com/channel/UCh3dCe15SmIecart5YU8N-Q/videos?view=0&sort=dd&flow=grid

This is the camera Ros package we need to install if you want to explore it

https://github.com/IntelRealSense/realsense-ros

Then we will try to calibrate the camera with the robot, I can take this opportunity to explain transformation matrices

If all goes well we should be able to see 3d image with the robot simulation in rviz!

We will start with the one I sent

We might also need to install this library manually

https://github.com/IntelRealSense/librealsense

My objective would be to set things up on the robot PC since this will be the one actually connected to the camera, but you can try replicating on your machines as well if you wish so

We will also need this package for the calibration part

https://github.com/pet1330/whycon-orig

april tag installation

https://github.com/AprilRobotics/apriltag

ready images

https://github.com/AprilRobotics/apriltag-imgs

generating customs tags (seems to be using java)

https://github.com/AprilRobotics/apriltag-generation

user guide

https://github.com/AprilRobotics/apriltag/wiki/AprilTag-User-Guide

this is the link for whycon as well

https://github.com/gestom/whycon-orig

we only need to install it (install listed dependences, clone package, make in your workspace)

I have a python script ready that takes output from the marker detection and generate the estimated pose

https://moveit.ros.org/documentation/concepts/

This is a nice moveit tutorial summarising it's functionality