Robotic Arm: Pick & Place

审阅
代码审阅 3
HISTORY

Meets Specifications

Writeup

The writeup / README should include a statement and supporting figures / images that explain how each rubric item was addressed, and specifically where in the code each step was handled.

✅ Your write up is complete, with all the required figures and images.
❌ You could improve the look of your write up a little bit by :

1. Your figure where you explain the trigonometry for deriving formulas should be rotated for easier reading.
2. You could make all your formulas in LaTeX (a very valuable skill for scientific texts)
3. Add some pictures of your robot after a successful pick and place operation showing a full basket

Kinematic Analysis

Your writeup should contain a DH parameter table with proper notations and description about how you obtained the table. Make sure to use the modified DH parameters discussed in this lesson. Please add an annotated figure of the robot with proper link assignments and joint rotations (Example figure provided in the writeup template). It is strongly recommended that you use pen and paper to create this figure to get a better understanding of the robot kinematics.

Your write-up contains

- ✅ DH Table
- ✅ Explanations
- ✅ Required Illustrations

Your writeup should contain individual transform matrices about each joint using the DH table and a homogeneous transform matrix from base_link to gripper_link using only the position and orientation of the gripper_link. These matrices can be created using any software of your choice or hand written. Also include an explanation on how you created these matrices.

Your write-up contains

- ✅ the individual transform matrices about each joint using the DH table
- ✅ homogeneous transform matrix from base_link to gripper_link using only the position and orientation of the gripper_link
- ✅ Explanations

Based on the geometric Inverse Kinematics method described here, breakdown the IK problem into Position and Orientation problems. Derive the equations for individual joint angles. Your writeup must contain details about the steps you took to arrive at those equations. Add figures where necessary. If any given joint has multiple solutions, select the best solution and provide explanation about your choice (Hint: Observe the active robot workspace in this project and the fact that some joints have physical limits).

Your write-up contains

- ✅ Derivations the equations for individual joint angles
- ✅ details about the steps you took to arrive at those equations
- ✅ Explanations
- ✅ handled multiple solutions

Project Implementation

`IK_server.py` must contain properly commented code. The robot must track the planned trajectory and successfully complete pick and place operation. Your writeup must include explanation for the code and a discussion on the results, and a screenshot of the completed pick and place process.

- ✅ Your code is nicely commented.
- ✅ The robot tracks the planned trajectory and successfully completes the pick and place operation

↓ 下载项目

3	代码审阅评注	›

返回 PATH

给这次审阅打分

学员 FAQ