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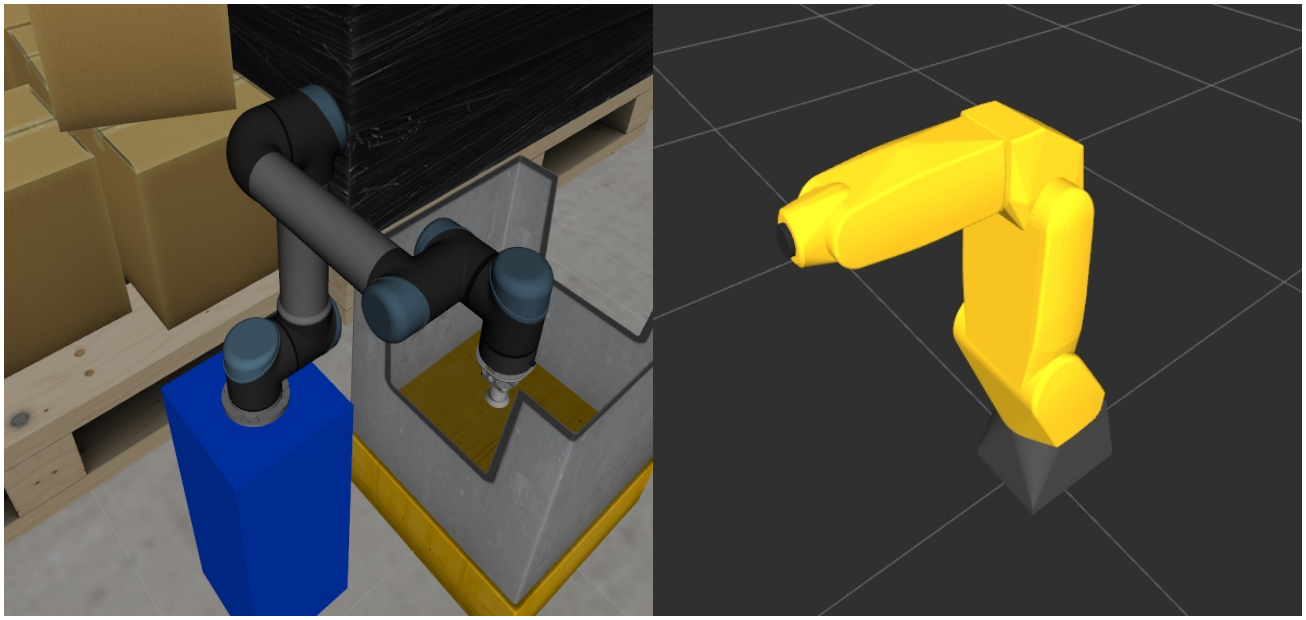
Practical Assignment 3

Overview

In this assignment you will need to **replace** Robot 2 (the UR5) with a different robot from another ROS package.

The package is provided to you in the Week 2 materials that you've downloaded earlier. It is the `hrwros_week2` package which provides support for a single new robot model: the Fanuc LR Mate 200iC.

In the figures below, the UR5 is on the left. The new robot, the LR Mate 200iC, is on the right (note: this just shows the robot, it is **not** an example of the solution).



You will have to update the assignment 3 xacro file to use this new model and place it on the pedestal behind the pallet with the boxes which now supports Robot 2 (ie: the UR5).

The `hrwros_week2` package provides the required files and the xacro macro for the robot in the `urdf` sub directory.

The name of the xacro macro of the new robot is **`fanuc_lrmate200ic`**. Be sure to import the correct file with the macro definition inside it.

The `hrwros_week2` package also provides a launchfile you can use to view the new robot in RViz called `view_week2_replacement_robot.launch` (note: you can **not** use this launchfile as a solution to this assignment).

Be sure to check the relevant videos (2.4 and others). You could run `check_urdf` to make sure your implementation is correct.

Solution requirements:

For this assignment you will need to *edit* the `hrwros_week2` package that has been provided to you as part of the Week 2 download (see *Weekly Contents*). The only file that needs to be changed is `hrwros_assignment3.xacro` in `hrwros_week2/urdf`.

You will not be asked to upload the `hrwros_assignment3.xacro` file, instead, you must make a screenshot in RViz **showing the new robot on the pedestal of Robot 2**.

You can use the `visualize_hrwros_assignment3.launch` file in the `hrwros_week2` package to start RViz while you're editing the XACRO file.

Correct implementations will show:

1. the new robot model properly mounted on the pedestal where Robot 2 is now
2. the new robot with an identical orientation (ie: rotation) as Robot 2: in its startup pose, the replacement robot should point in the same direction as the UR5. The replacement robot does **not** need to completely mimic the position of all joints and links of the UR5.
3. the robot must be **on** the pedestal, **not** in the pedestal or slightly above it
4. not touching anything other than the pedestal

Warning: This assignment contains peer- and expert-feedback steps provided for verified learners. As an audit learner, you are free to try this on your own, but you won't be able to get feedback from the course team. If you would like to work on the assignment as an audit learner, the full assignment is the text above.

Verified Track Access

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