



Franka Panda Arm Setup

The following is a collection of instructions for getting the Franka Panda arm up and running with the cri python library for control.

REQUIREMENTS:

- Real-time kernel patch for Linux.
 - **At time of writing (21/03/23) desktop PC is setup in FARSCOPE room with RT patch for operating the Franka arm**
 - This is perhaps the most time consuming part of the install process. Instructions are linked below

[Installing the real time kernel](#)

SETUP (Python install):

- Once on the RT kernel is installed create an anaconda environment
- Within this environment install the following dependencies:
 - libfranka <https://frankaemika.github.io/docs/>
 - Eigen <https://robots.uc3m.es/installation-guides/install-eigen.html>
 - Pybind11 `pip install pybind11`
- Clone the following repo <https://github.com/jlloyd237/pyfranka>
- cd into the cloned directory and run the following command `pip install -e .`

- This will install pyfranka
- Install the dependencies for cri:
 - `pip install pyqt5`
- Clone the cri repo <https://github.com/jlloyd237/cri>
- cd into the cloned cri directory and run `pip install -e .` to install cri

SETUP (Franka Arm):

- The instructions to setup and connect to the arm are present in the link below. A profile should already exist for the arm in use so no setup should be required there.
 - https://frankaemika.github.io/docs/getting_started.html#installing-the-fci-feature

TESTING:

- With the environment you installed cri and pyfranka into, run the following script
~/.cri/tools/robot_jogger/robot_jogger.py
- When running this file, a GUI should appear. Connect to the robot using the same static IP address you used to setup the arm in the previous section.
- Once connected, attempt to move the arm using the GUI sliders.
 - Errors at this point are often caused by the user not using the RT kernel. If you experience issues here, restart your system and make sure you're booting into the RT patch that you installed previously.
- If the arm moves, you're ready to go!

COMMON BUGS:

 [Unable to import Pyfranka error](#)