Installation I

Install a scientific Python distribution

- Any "Scientific Python" should do, but it must include NumPy, SciPy, and matplotlib.
- For Windows, e.g., Python(x,y):
  `https://code.google.com/p/pythonxy/`
- For Ubuntu/Debian, e.g., Spyder (an IDE):
  `sudo apt-get install spyder`

Download CasADi (Version $\geq$3.0)

- Windows/Linux/Mac zip file available at
  `http://files.casadi.org`
- Unzip to a convenient location (e.g., `C:/Python2.7/casadi` for Windows or `/opt/casadi` for Casadi), or use Python install script (see `installer` folder)

Installation II

Download our `mpctools` Python package

- Download zipped package (see "Downloads"):
  `https://bitbucket.org/rawlings-group/mpc-tools-casadi`
- Unzip to a convenient location.
- Move the `mpctools` sub-folder to where you unzipped `casadi` or use the `mpctoolssetup.py` Python script; the remaining files (examples and documentation) can be left where they are.

Add CasADi and `mpctools` to your Python path

- Open a Python interpreter (run `python` from a terminal/command prompt)
- Run the commands `import site; print site.getsitepackages()` to see where your site packages are stored
- In one of the site package folders, make a text file called `casadi.pth`, and type the path to your CasADi installation directory

Making Sure Everything Works

First, open a Python interpreter[1] and run `import casadi, mpctools`.

- If this doesn't work, make sure your CasADi folder shows up in `import sys; print sys.path`.
- If you have multiple Python distributions on your machine, don't (or at least make sure you're using the one you think you are).
- Make sure you are using Python 2.7 (not 3.x).

Then, try to run the examples in `mpc-tools-casadi`.

- In the Python interpreter, use `execfile("filename.py")`.
- `runall.py` will run everything and tell you if there are errors, but you won't see any plots.

[1] Open a command prompt/terminal in the `mpc-tools-casadi` folder and enter `python`. You may also be able to right-click and choose "Open a Python console".

Software Relationships