A treacherous journey through the world of cython, by George Oastler.

General workflow:

* Cython provides a c-like language / bindings to run code much faster than in python.
* Cython is a normal python module, but you must install a c compiler. On windows, this means installing visual studio. On linux / mac, just install gcc.
* Cython must be compiled, like any c program. To do this, python code is placed in a setup.py file to tell cython to “cythonize” the c-like code into a system library
  + These files end in .dll or .so and are system specific
    - This means you need to recompile on the cluster!
  + They must remain in place otherwise python won’t be able to find them at run time
* Cython files end in .pyx

Setting up cython:

* To save your sanity, MAKE SURE YOU HAVE YOUR CONDA ENVIRONMENT ACTIVE!
  + I’m not sure how it works exactly, but cython will add the compiled library (.so or .dll) to your environment
  + If you don’t have your environment active, it will still compile but instead silently fail with a module not found error in python. This is super annoying and difficult to debug!
* Run the following in terminal / cmd prompt to compile cython
  + python3 ./path/to/setup.py build\_ext -i

Tony Adds:

If you want to change the cython code in the pyx files, just rerun

python setup.py build\_ext -i

and it rebuilds it