Steps that I used to get python installed and python packages installed for running Rich’s iric code that I’ve modified. I found that ArcGIS Pro made managing the python environment and package installation very convenient.

* Install ArcGISPro

<https://usdagcc.sharepoint.com/sites/fs-eng-agisp/arcgispro/SitePages/Working%20Locally.aspx>

* Under the python manager in ArcGISPro, clone the arcgispro-py3 environment and install required python packages
  + To clone, go the Manage Environments
  + Select cloned environment as the Active environment
* Intall VTK an dh5py packages using conda
  + push Windows button
  + type “python command prompt” and enter
  + confirm that the command prompt says

*(arcgispro-py3-clone2) C:\Users\jascott\AppData\Local\ESRI\conda\envs\arcgispro-py3-clone2>*

where my cloned python environment is “arcgispro-py3-clone2”, but yours will be whatever it was called when you created it in ArcGISPro Python Manager.

* + Enter ‘conda’, no quotes
  + The command prompt should bring up details about the conda tool
  + Now type ‘conda install vtk’
  + Vtk should be installed to the python environment
  + Repeat for ‘h5py’
  + Return to ArcGIS Pro
  + Go to Add Packages
  + Search for and install
    - vtk
    - H5py
    - Spyder

Next copy: iriclib.dll, cgnsdll.dll, and hdf5.dll from your iric install directory, for example C:iRIC/guis/prepost, into the fastmech solver folder, for example C:iRIC/solvers/fastmech.

To run and write python code, I use Spyder. To use the spyder software, you must run the program using a command prompt. To do this,

* push Windows button
* type “python command prompt” and enter
* confirm that the command prompt says

*(arcgispro-py3-clone2) C:\Users\jascott\AppData\Local\ESRI\conda\envs\arcgispro-py3-clone2>*

where my cloned python environment is “arcgispro-py3-clone2”, but yours will be whatever it was called when you created it in ArcGISPro Python Manager.

* Type spyder into the command prompt and push enter. This should run the spyder program.
* NOTE: See the definition.xml file in \solver\fastmech folder. This will help interpret the variable names and definitions in the python code.