READ ME

Welcome to the Cornell CodeFest!

This is AnsysLab and within you will find a number of jupyter notebooks for running Python code.

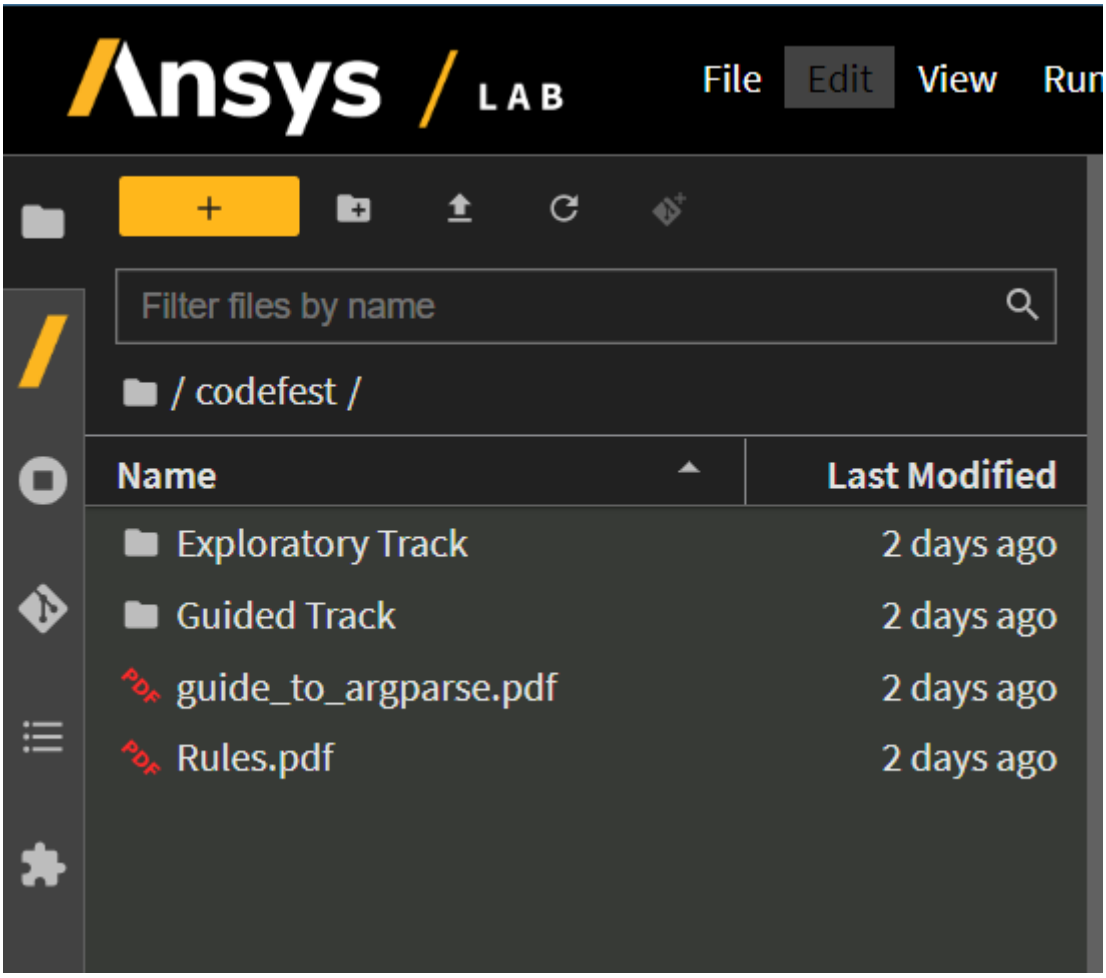
> If you are unfamiliar with jupyter notebooks we recommend you check out the explanation in the Ansys Innovation Courses Intro to Python course, which you can find (for free) here. This covers how jupyter notebooks work. Although, it will look a bit different to AnsysLab because AnsysLab is based on jupyterlab, which also uses jupyter notebooks but with a slightly different interface. The documentation for jupyterlab can be found here.

You can also use Ansys products from within these notebooks via the PyAnsys interfaces without having to install Ansys on your own computers. However, should you wish to do so for the challenges you are more than welcome. You can find details about Ansys Student here.

Getting Started

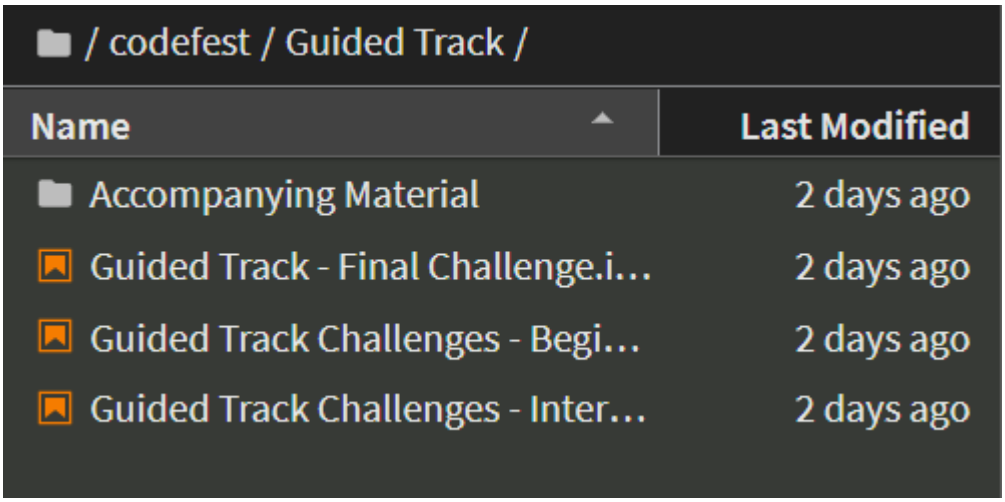
The rules of the CodeFest can be found in the `Rules.pdf` file in the same directory as this. There is also a short article on the builtin Python library `argparse`, which you may also find useful.

In order to open these files (as you will have discovered by opening this file), you need to navigate this side-panel.

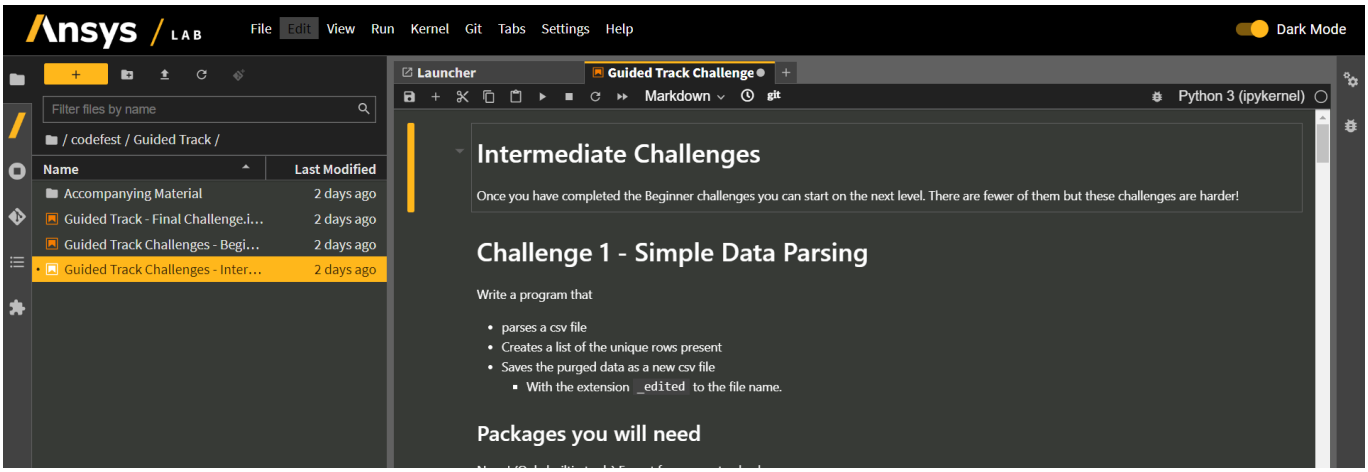


The Exploratory challenges can be found in the `Exploratory Track` directory and the Guided track challenges in the `Guided Track` directory.

Jupyter notebooks appear with an orange square beside them in AnsysLab and an orange bookmar within that.



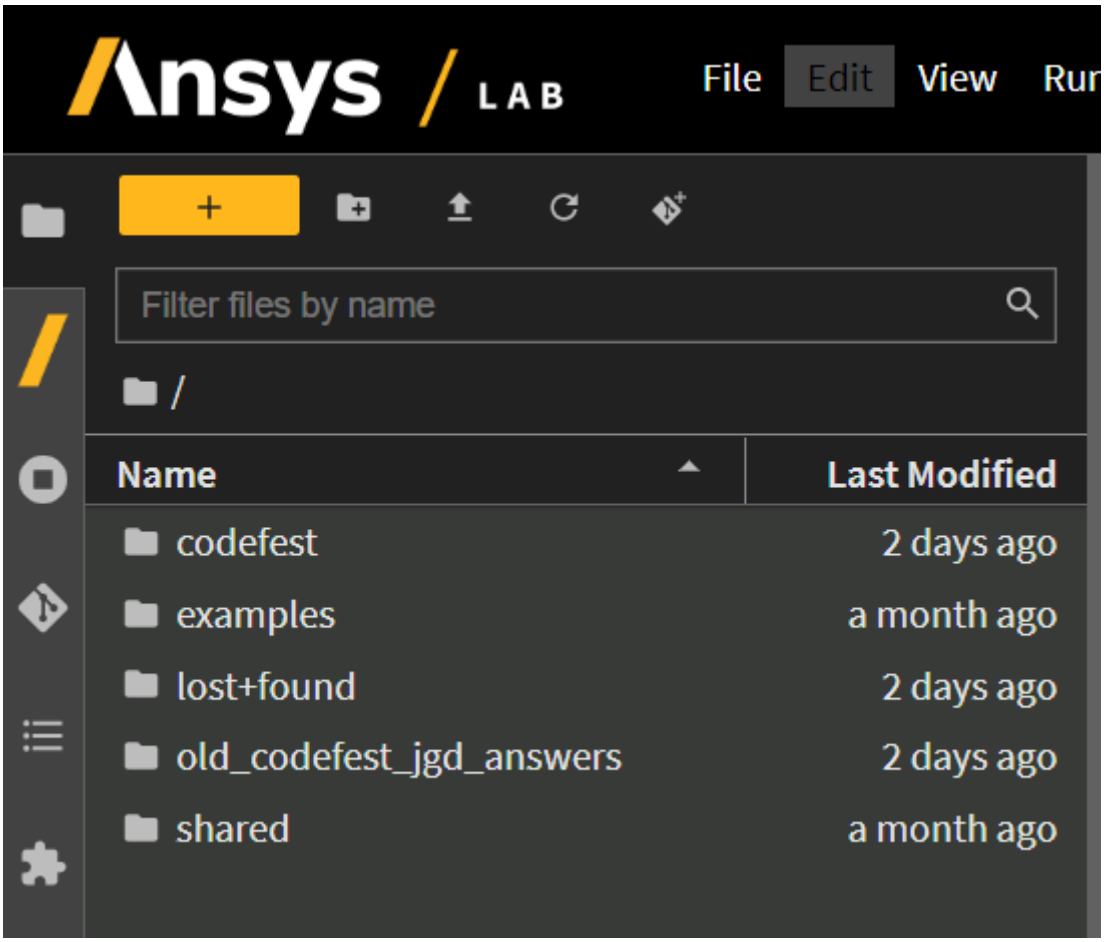
Double-clicking on one of these will open the notebook in a new tab, *within* AnsysLab.



You can then edit the notebook, run cells, add code and **don't forget to save it**!

If you need to get back the original challenges you can save the notebook you're currently working in (or directory) with a new name and prefix. Then, the original material will be copied into your AnsysLab directory when it next syncs with the server. You can even do this with the whole `codefest` directory.

See below, where I've renamed my directory (yours may look different) so that I can keep notes and answers on the guided track, but the `codefest` directory still exists.



Packages Available in AnsysLab

AnsysLab is running Python 3.9.12 and has all the builtin packages associated with that. In addition, many common scientific Python packages are installed (amongst others) as well. This does include

- numpy
- scipy
- pandas
- matplotlib

If you're using AnsysLab, you should not be missing any packages on the Guided track that you might need. If you wish to use others on the Exploratory track, then we recommend using your own Python installations for that if AnsysLab doesn't have what you need.