Getting Started with Anaconda and JupyterLab

Last updated: August 16, 2024

1 Installing Anaconda

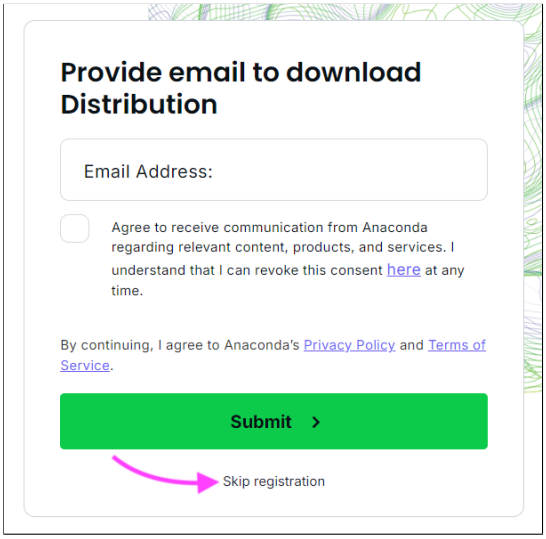
- In this course, we will use the Anaconda Python distribution.
- To install Anaconda, carefully follow the instructions below!
  - These instructions are based on the documentation found here:

    https://docs.anaconda.com/anaconda/install/windows/

Step 1. Download the Anaconda installer. Go to the following URL:

https://www.anaconda.com/download

If you want, enter your email address and click Submit. Otherwise, simply click Skip registration.



Step 2. On the next screen, click the Download button to download the installer to your computer.

Step 3. Once the installer is downloaded, find it. Double-click on the installer to launch.

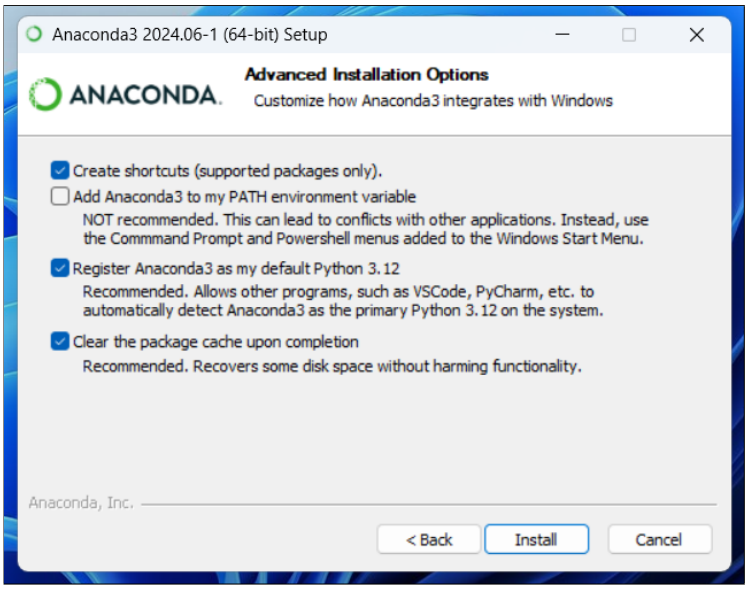
Step 4. You should see a Welcome to Anaconda3 dialog box. Click Next.

Step 5. Read the licensing terms and click I Agree.

Step 6. Select Just Me (recommended) and click Next.

Step 7. Leave the default destination folder as-is and click Next.

Step 8. You should now see the dialog box on the right.

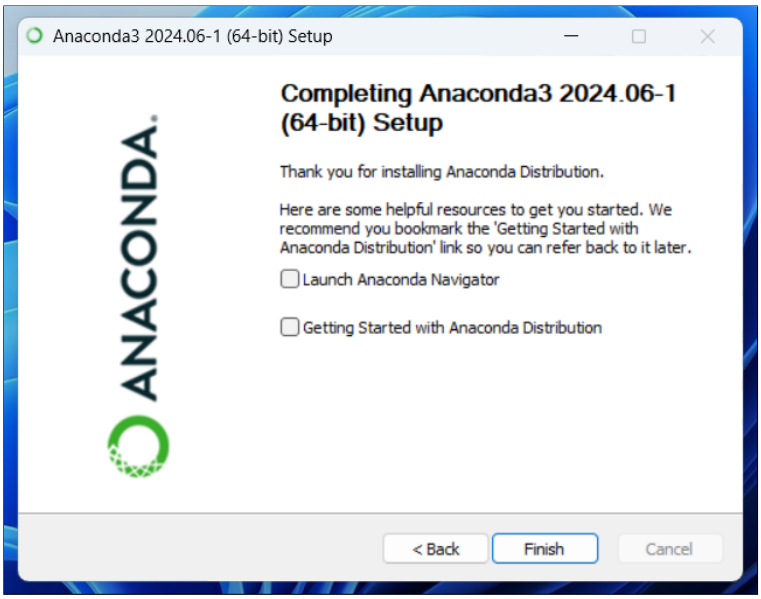


- Leave the first box checked.
- Leave the second box unchecked: Do not add Anaconda to your system PATH environment variable. Adding Anaconda to the PATH environment variable can interfere with other software.
- Leave the third box checked: Register Anaconda as your default Python.
- Check the fourth box: Clear the package cache upon completion.
- Click the Install button.

Step 9. You should see a dialog box with a progress bar. This will take a while. When the progress bar is full, click Next.

Step 10. Ignore the advertisement for Anaconda in the Cloud and click Next.

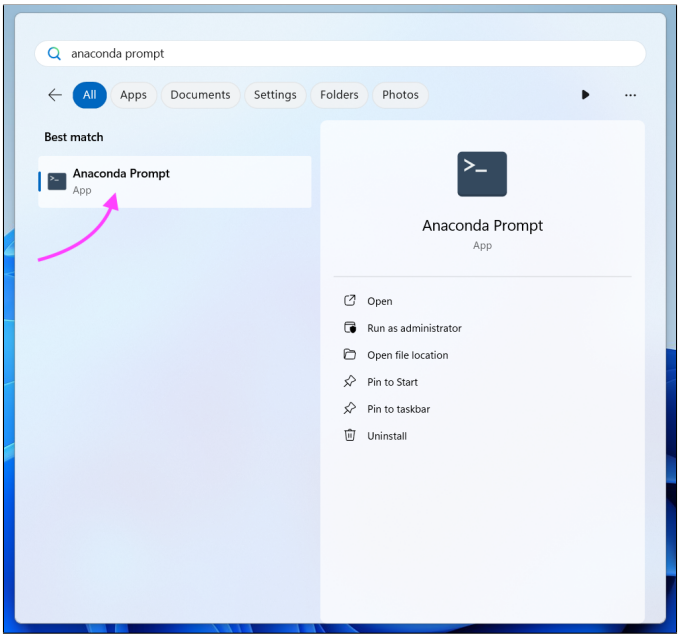
Step 11. After a successful installation, you will see the dialog box shown on the right. Uncheck the two boxes and click Finish to complete the installation.



2 Install packages you'll need for this class

- Now that Anaconda is installed, let's install some additional packages that you will need for this class.

Step 1. Click on ⊞ at the bottom of your screen. Search for `anaconda prompt`. Then click `Anaconda Prompt` in the search results. A terminal window will appear.



Step 2. At the prompt, type the following and press `Enter`:

```
conda install conda-forge::rpy2 conda-forge::pyomo conda-forge::glpk
```

You will see the conda package installer solve the environment. This might take a while.

Step 3. The conda package installer will then ask you if you want to proceed. Type `y` and press `Enter`. The conda package installer will then download the packages and complete the installation.

Step 4. Close the terminal window.

3 Launching JupyterLab

- **Optional but strongly suggested.** Make Google Chrome your default web browser, if it is not already. Follow the instructions at the link below:

  https://support.google.com/chrome/answer/95417

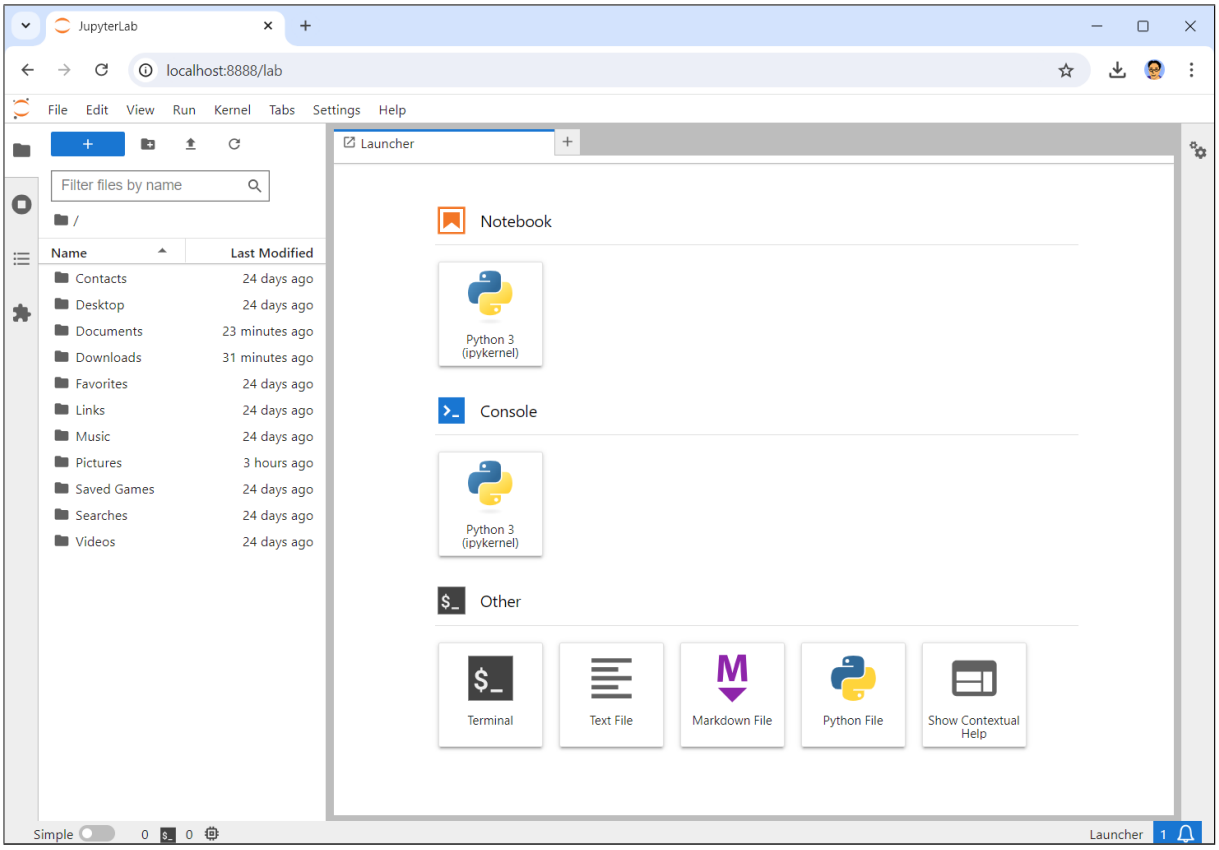
- In this class, we will be writing Python code in **JupyterLab**. Let's open JupyterLab.

Step 1. Click on ⊞ at the bottom of your screen. Search for `anaconda prompt`. Then click `Anaconda Prompt` in the search results. A terminal window will appear.

Step 2. At the prompt, type the following and press `Enter`:

```
jupyter lab
```

Step 3. Your default web browser should open with the JupyterLab interface. It should look like this:



Keep the terminal window open until you're done with Jupyter Lab.

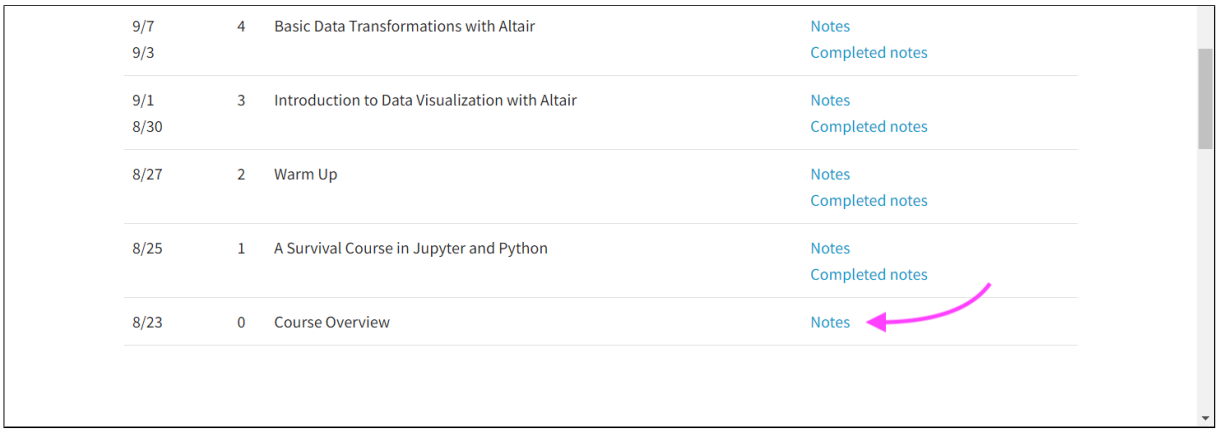
4 Downloading and opening Jupyter notebooks in zip files

- The course website is here:

  `https://courses.uhan.me/action`

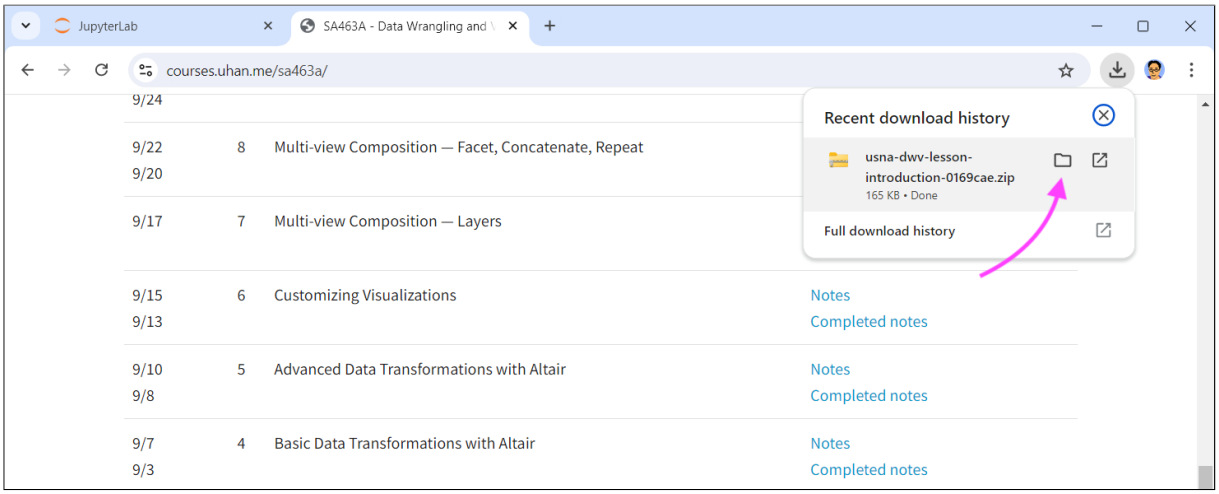
- You will need to download Jupyter notebooks in zip files from the course website and open them in JupyterLab. Follow these instructions to download a lesson from the course website. These instructions assume you're using Google Chrome as your web browser.

Step 1. Start by clicking the link for the Jupyter notebook you want to use.

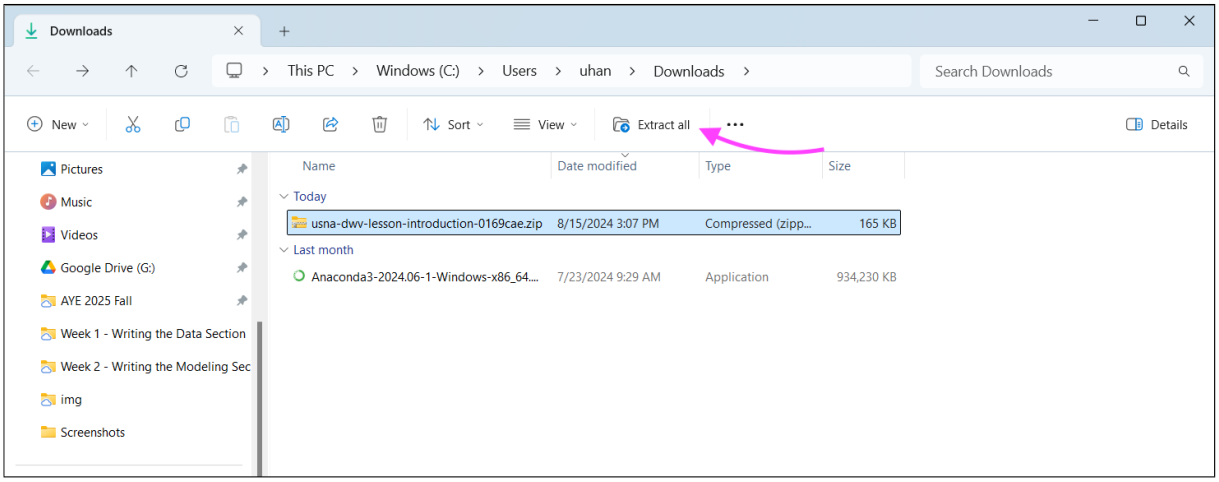


Step 2. A dialog box will appear. Choose a destination for this file, and click Save.

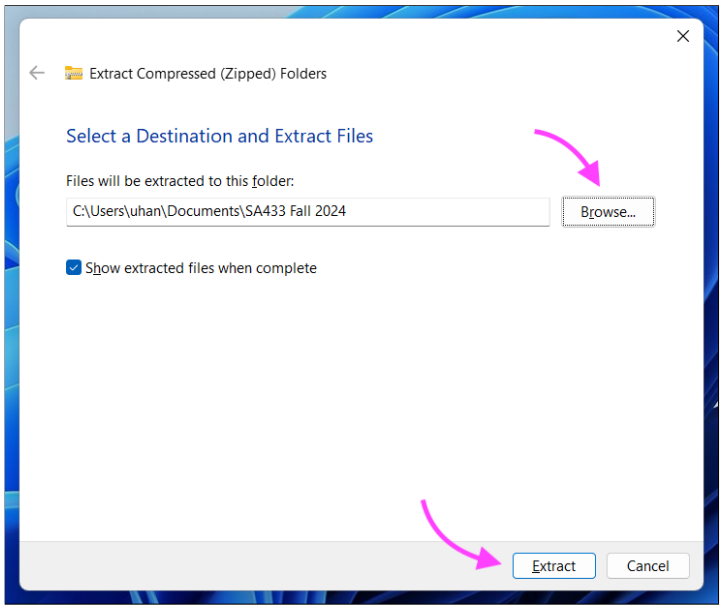
Step 3. Click the Downloads icon in the toolbar. Then click the folder icon next to the file you just downloaded.



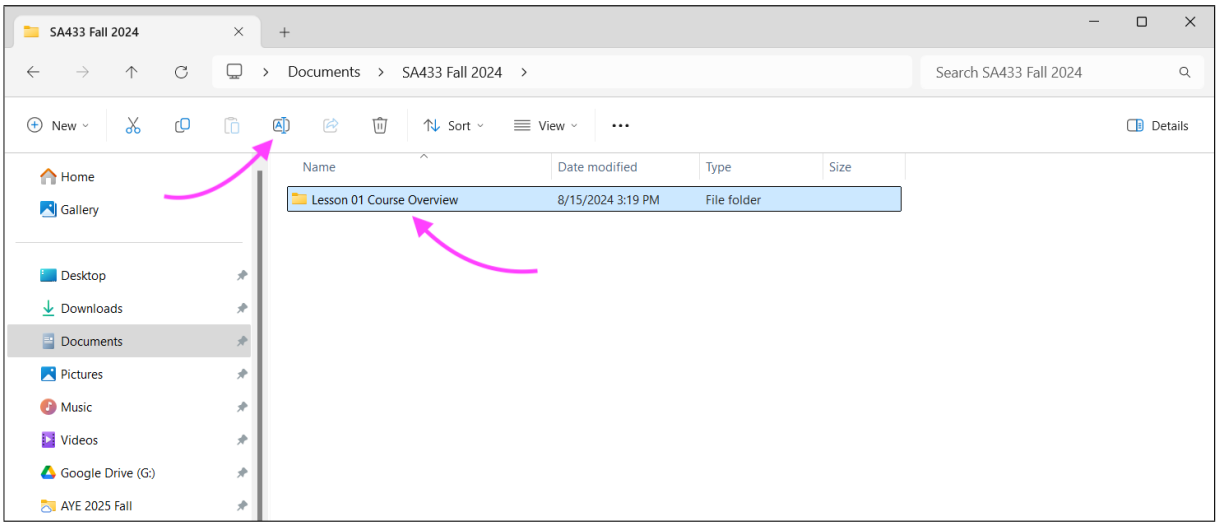
Step 4. A File Explorer window should appear, highlighting the file you just downloaded. Do not double-click it. Instead, select Extract all from the toolbar. (You can also right-click the file, and select Extract All...)



Step 5. A dialog box should appear, asking where you want to extract the contents of this file. Click on Browse and select where you want to put a new folder with the contents of the file. Then, click Extract.



Step 6. Once the extraction is done, a File Explorer window should appear, showing you the newly created folder with the contents of the file. Rename the folder something easy to read.



Step 7. In JupyterLab, navigate the file browser to the location of this newly created folder.