


Setting up Anaconda and Jupyter Notebook




<https://www.anaconda.com/download/>

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What is Anaconda? Products Support C

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Version 5.0.1 | Release Date: October 25, 2017

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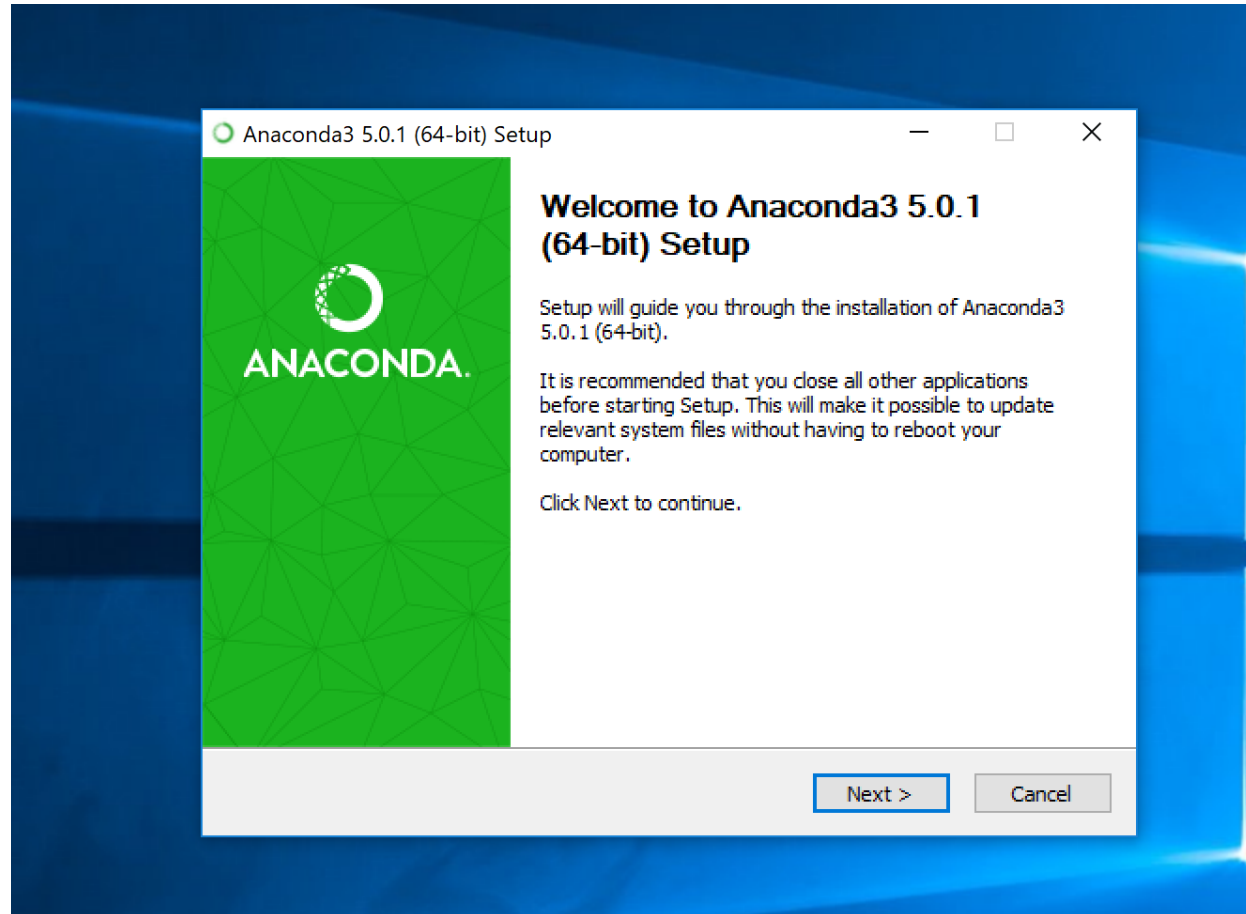
 Windows

 macOS

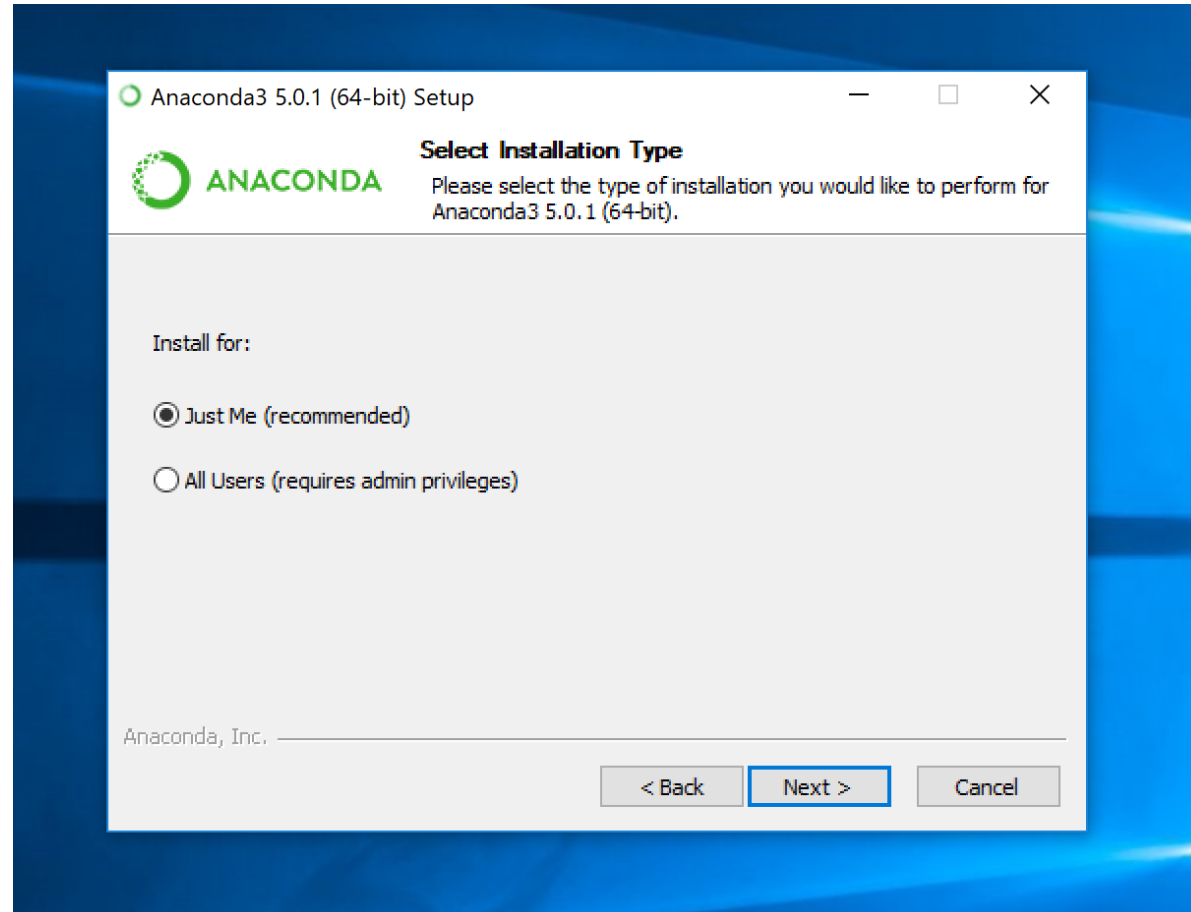
 Linux

Anaconda 5.0.1 For Windows Installer

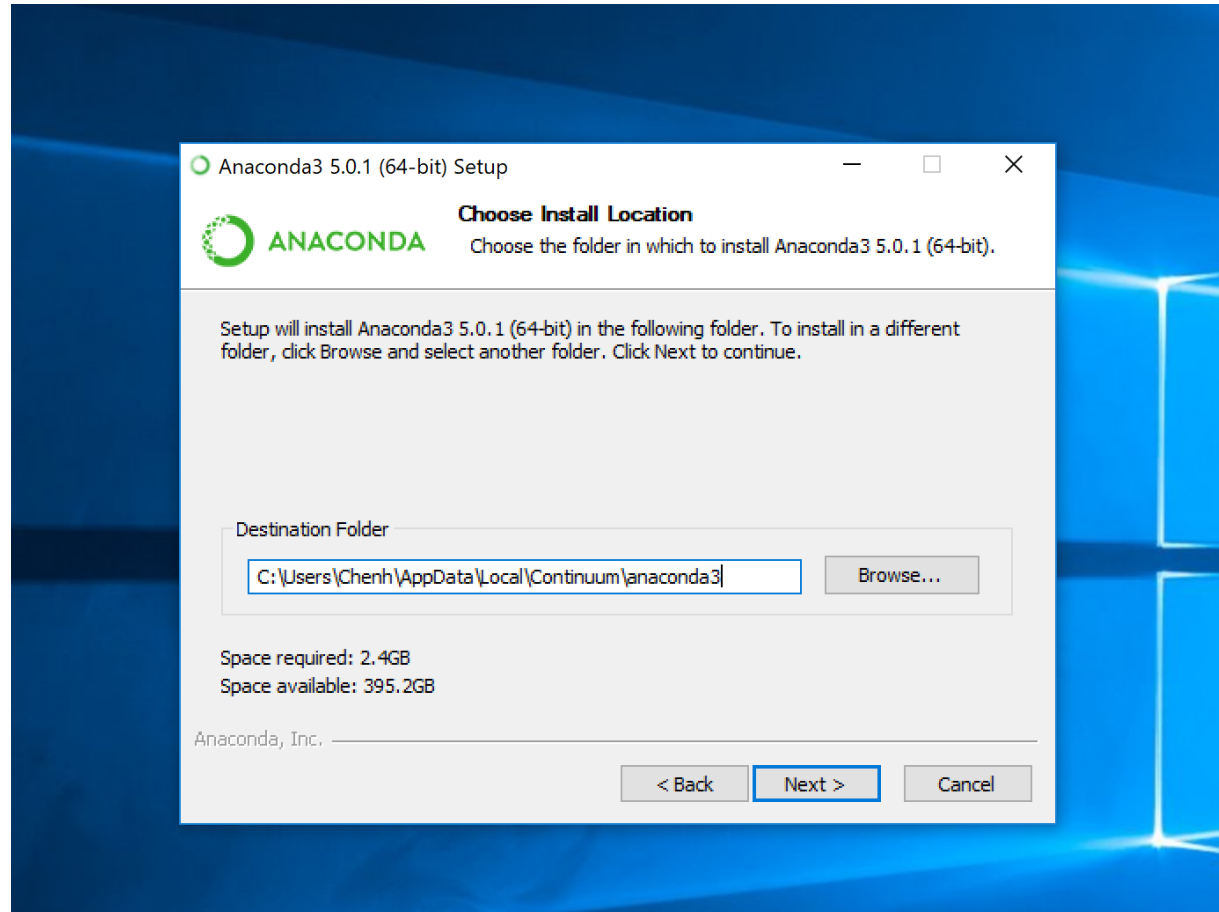
Installing..



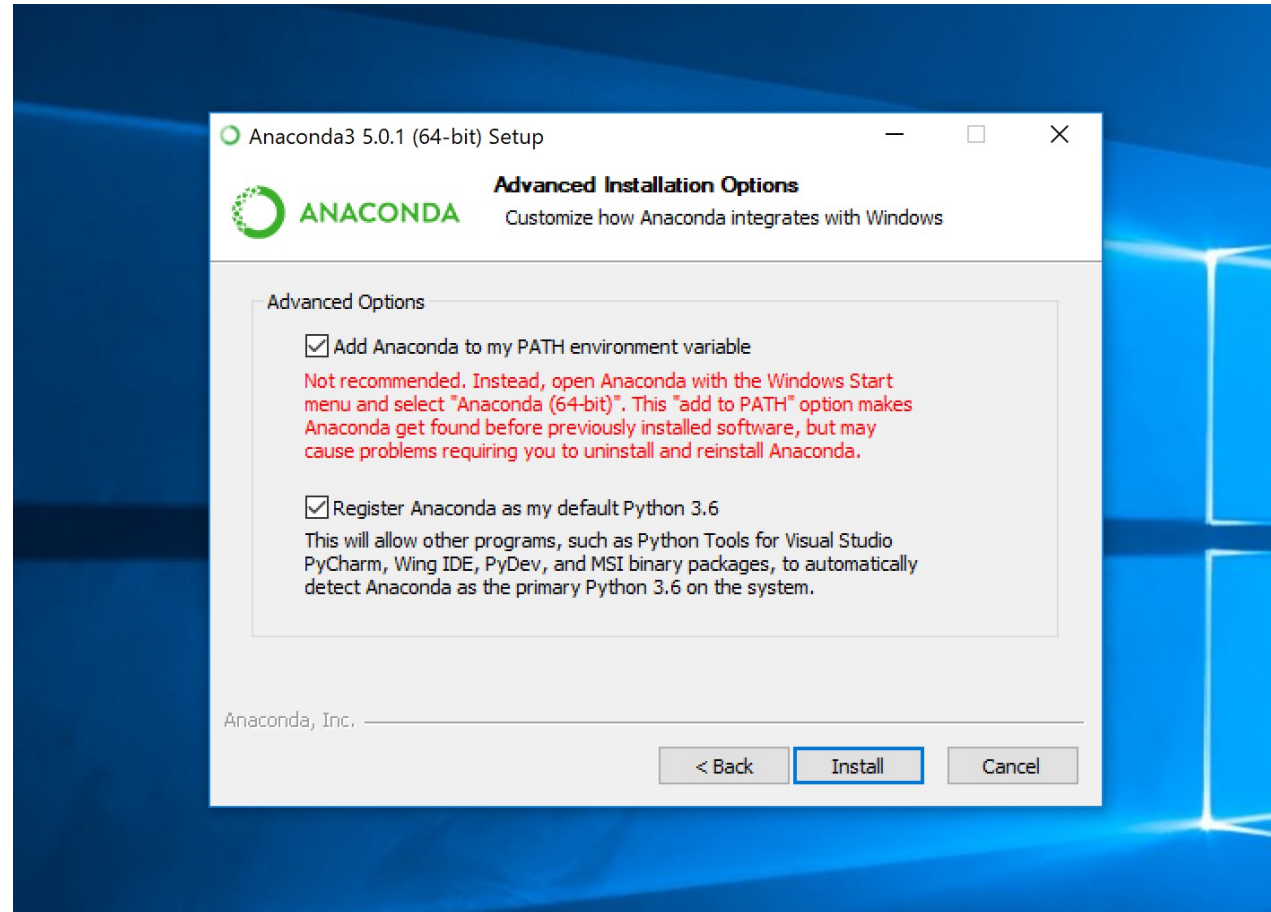
Installing..



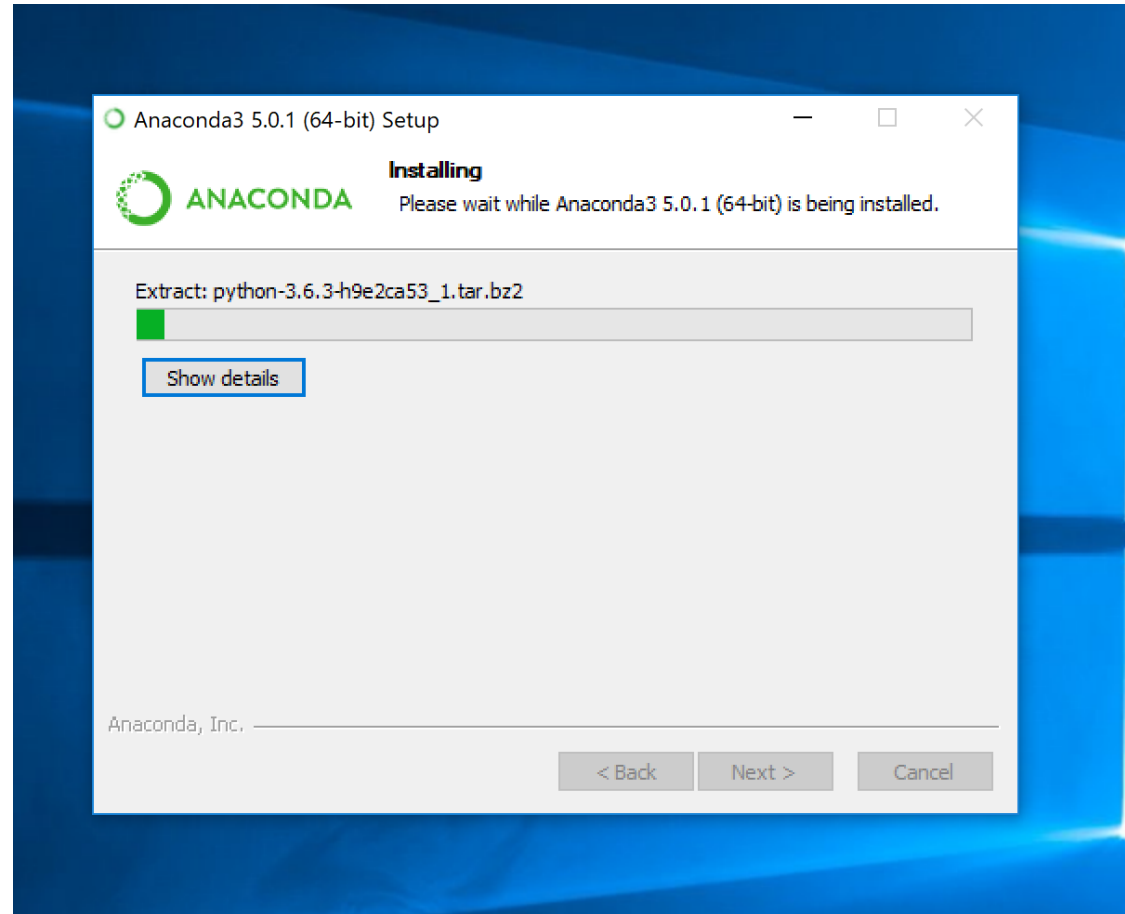
Installing..



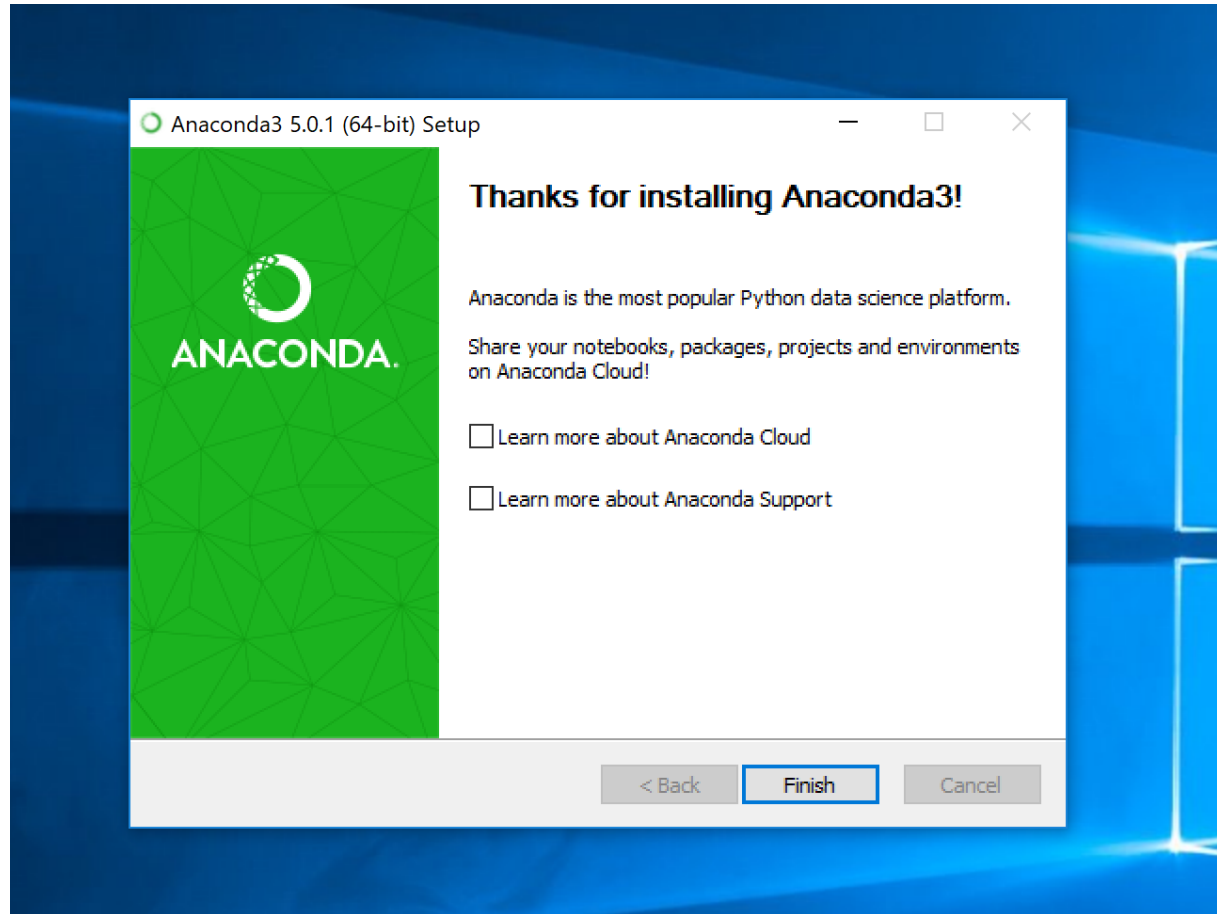
Important: Add anaconda to the PATH environment variable



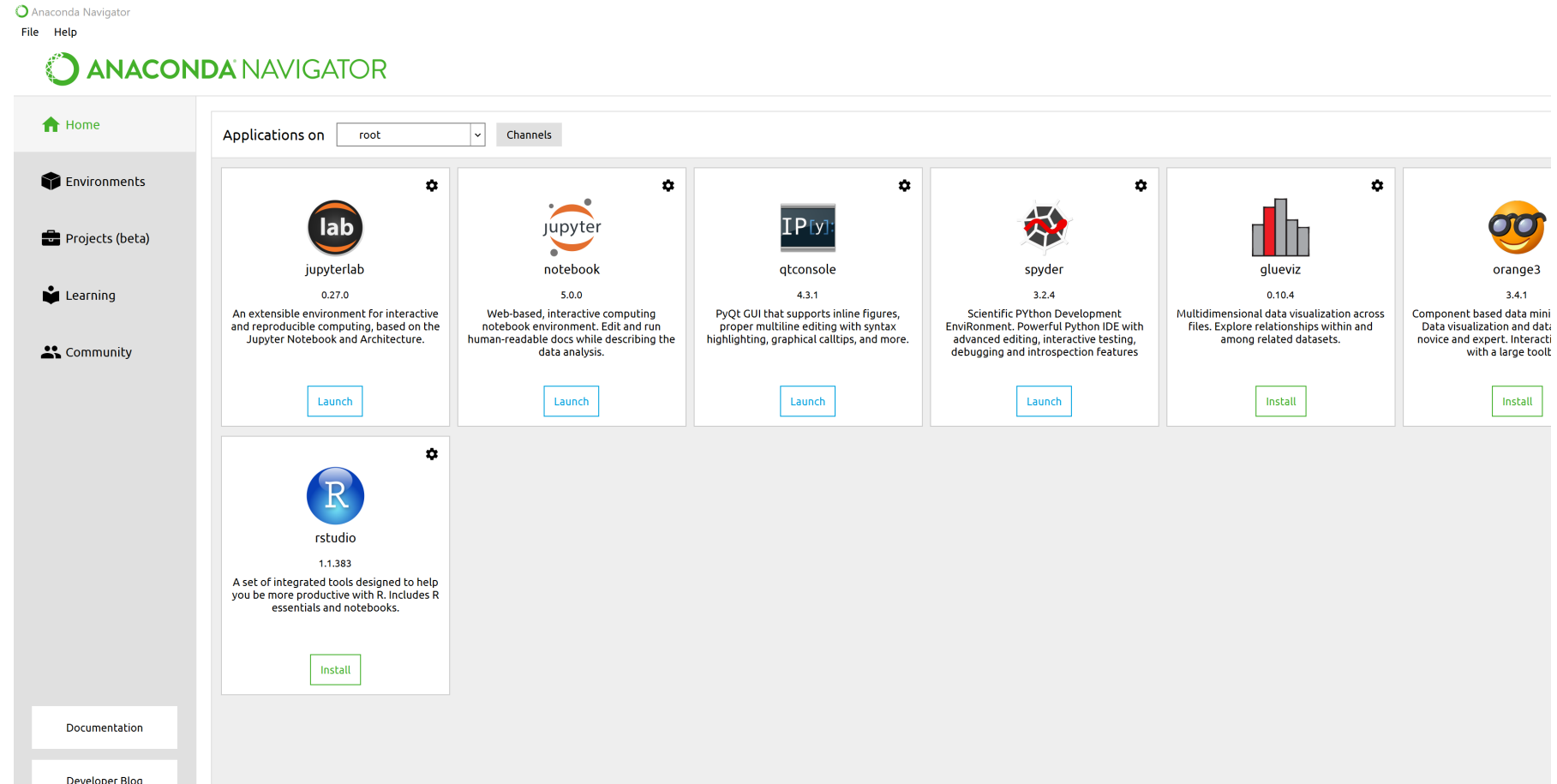
Installing..



Finished



Launch navigator in start menu



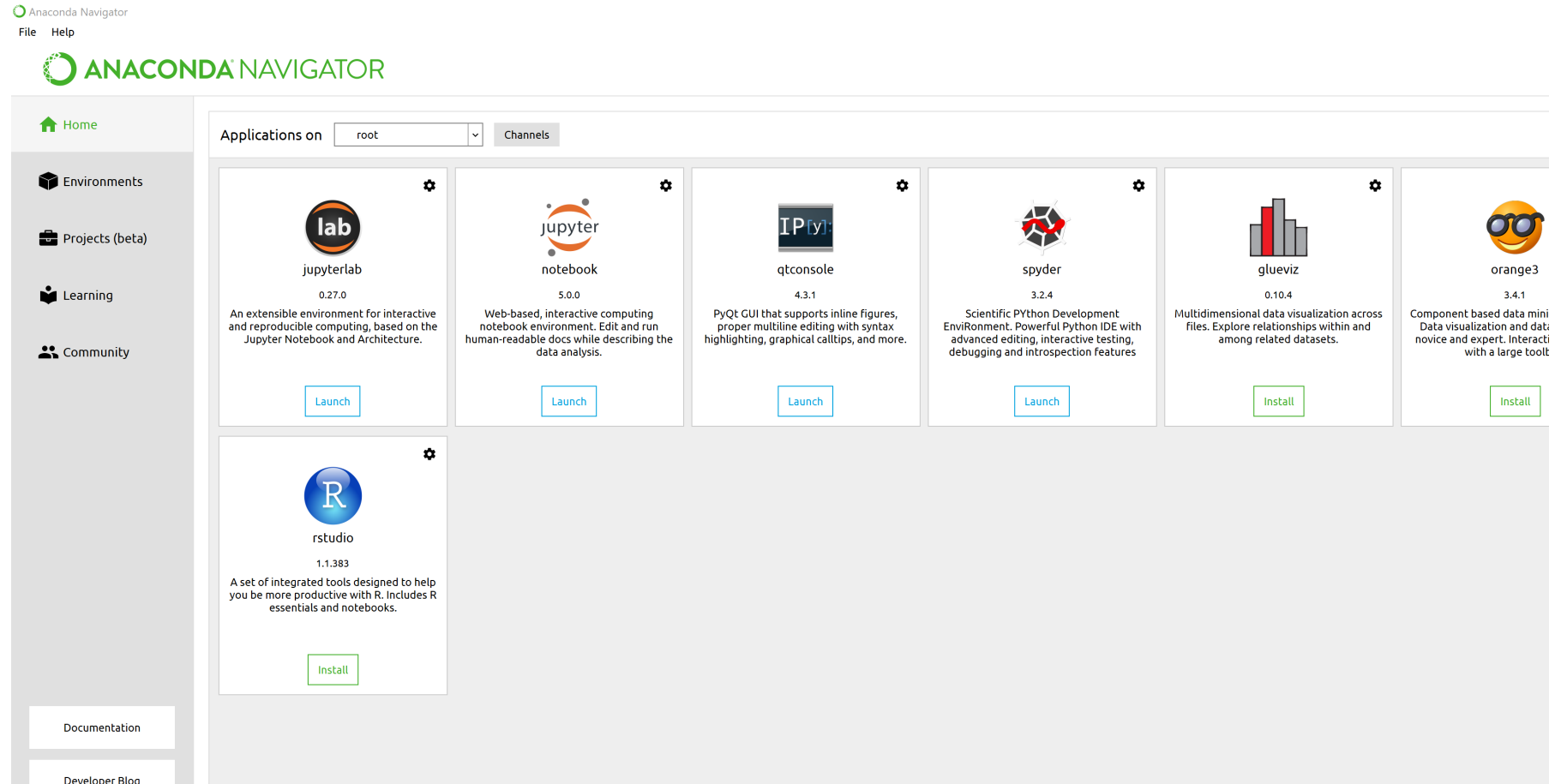
Jupyter notebook



What Is A Jupyter Notebook

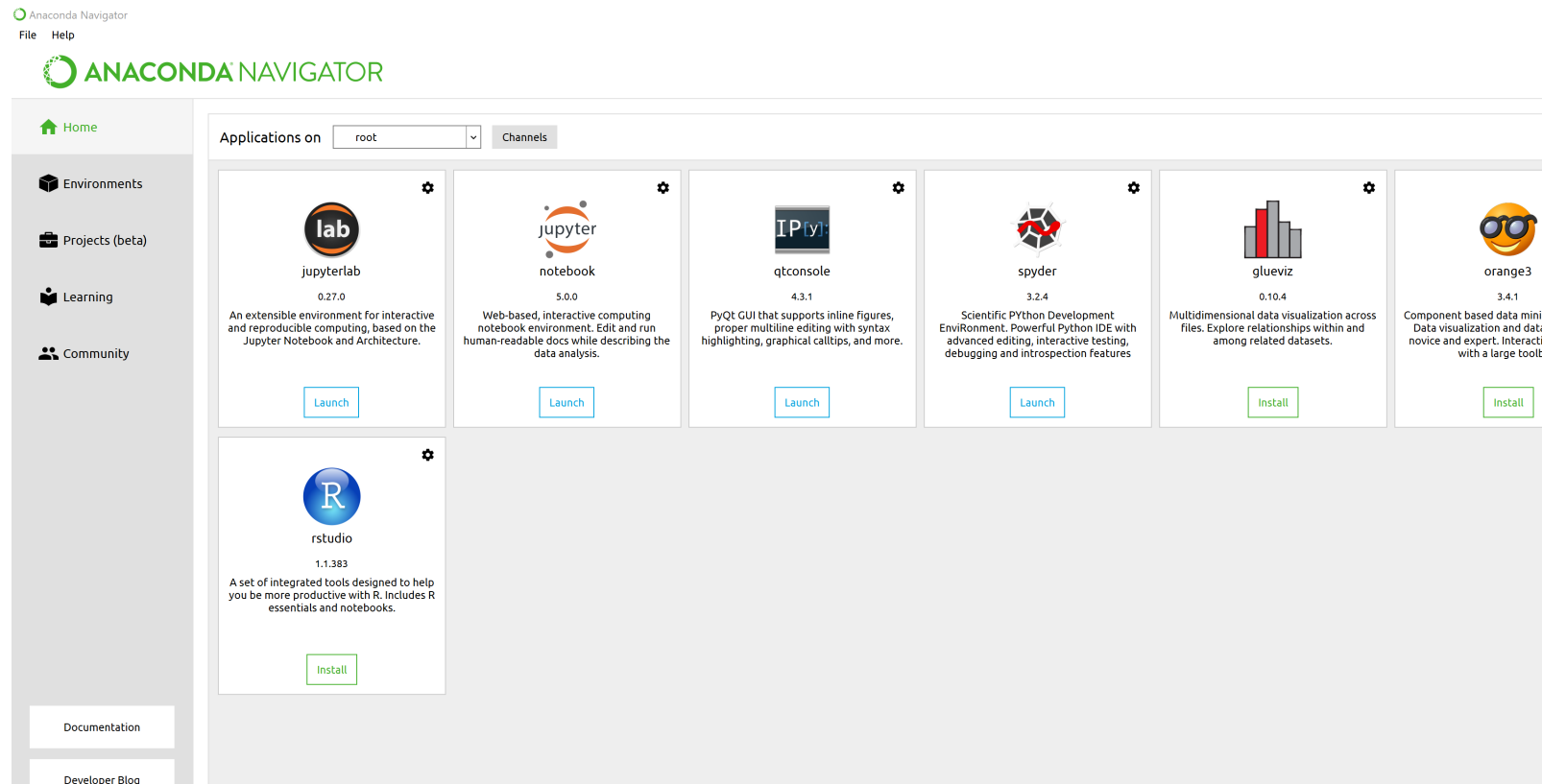
- A document that allows you to **mix both code and rich text elements**, such as figures, links, equations, **together in one place**.
- Jupyter notebooks provide interactive Python shell for you to run Python code.
- Great for data analysis, visualization, and sharing code among people.
- Files with extension `.ipynb`

Jupyter comes with Anaconda

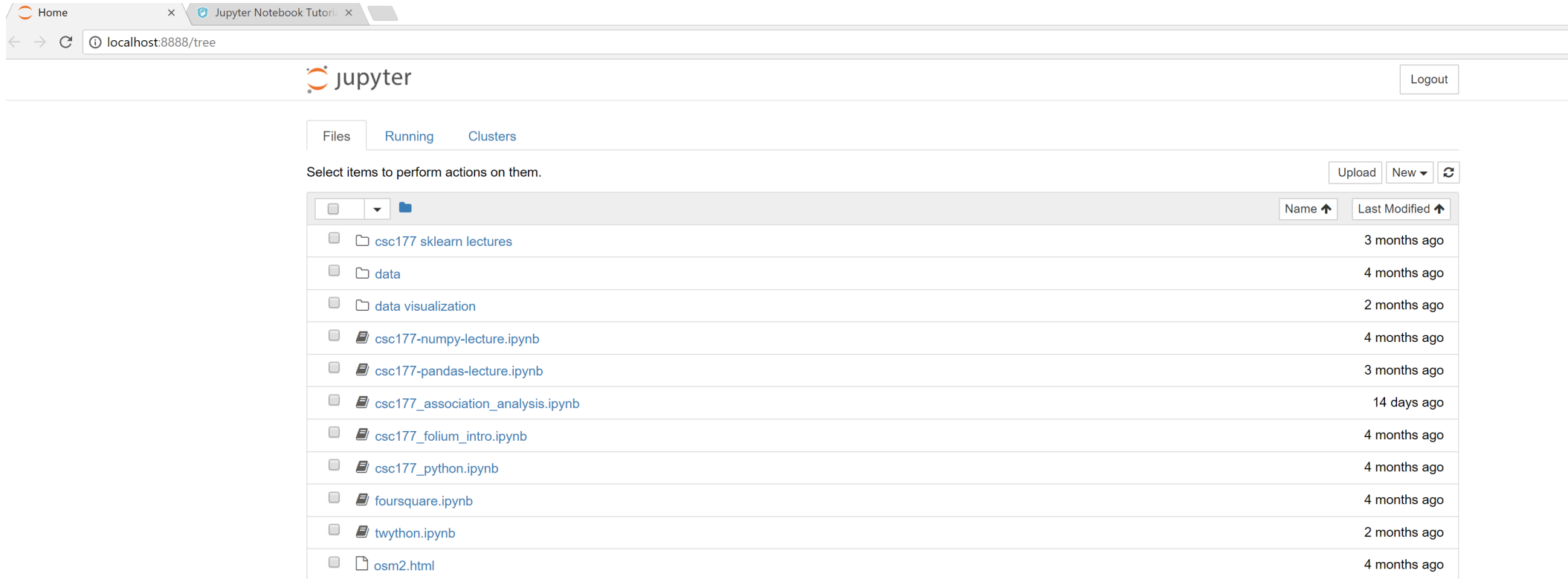


How to open Jupyter notebooks (option 1)

- Launch navigator in start menu
- Launch Jupyter



Then you'll see the application running in the web browser on the address: `http://localhost:8888`.



The screenshot shows a web browser window with two tabs: 'Home' and 'Jupyter Notebook Tutorial'. The address bar displays 'localhost:8888/tree'. The Jupyter logo is visible in the top left, and a 'Logout' button is in the top right.

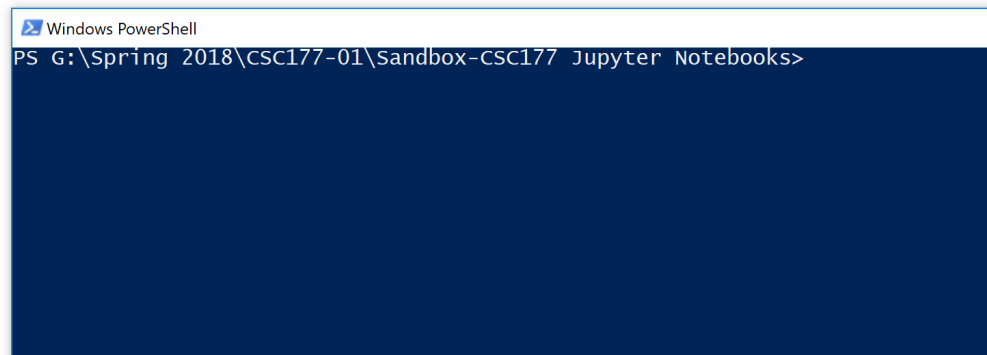
Below the header, there are three tabs: 'Files' (selected), 'Running', and 'Clusters'. A message says 'Select items to perform actions on them.' To the right of this message are buttons for 'Upload', 'New', and a refresh icon.

The main area displays a list of files and folders. Each item has a checkbox on the left, a name in the center, and a 'Last Modified' timestamp on the right. The items are as follows:

	Name	Last Modified
<input type="checkbox"/>	📁 csc177 sklearn lectures	3 months ago
<input type="checkbox"/>	📁 data	4 months ago
<input type="checkbox"/>	📁 data visualization	2 months ago
<input type="checkbox"/>	📄 csc177-numpy-lecture.ipynb	4 months ago
<input type="checkbox"/>	📄 csc177-pandas-lecture.ipynb	3 months ago
<input type="checkbox"/>	📄 csc177_association_analysis.ipynb	14 days ago
<input type="checkbox"/>	📄 csc177_folium_intro.ipynb	4 months ago
<input type="checkbox"/>	📄 csc177_python.ipynb	4 months ago
<input type="checkbox"/>	📄 foursquare.ipynb	4 months ago
<input type="checkbox"/>	📄 twython.ipynb	2 months ago
<input type="checkbox"/>	📄 osm2.html	4 months ago

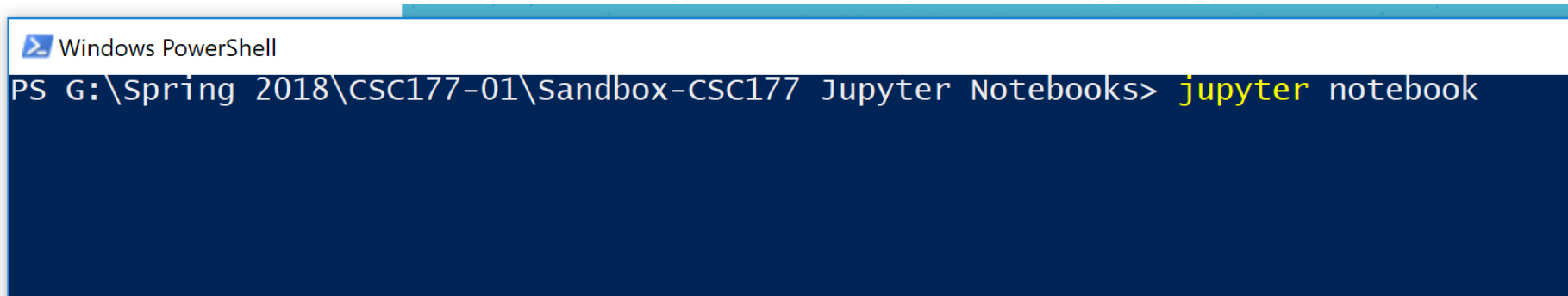
How To Open Jupyter Notebooks (option 2)

- Go to the folder where your notebook is in.
- Open CLI
 - E.g., on Windows, shift + right click, then select “open Powershell window”



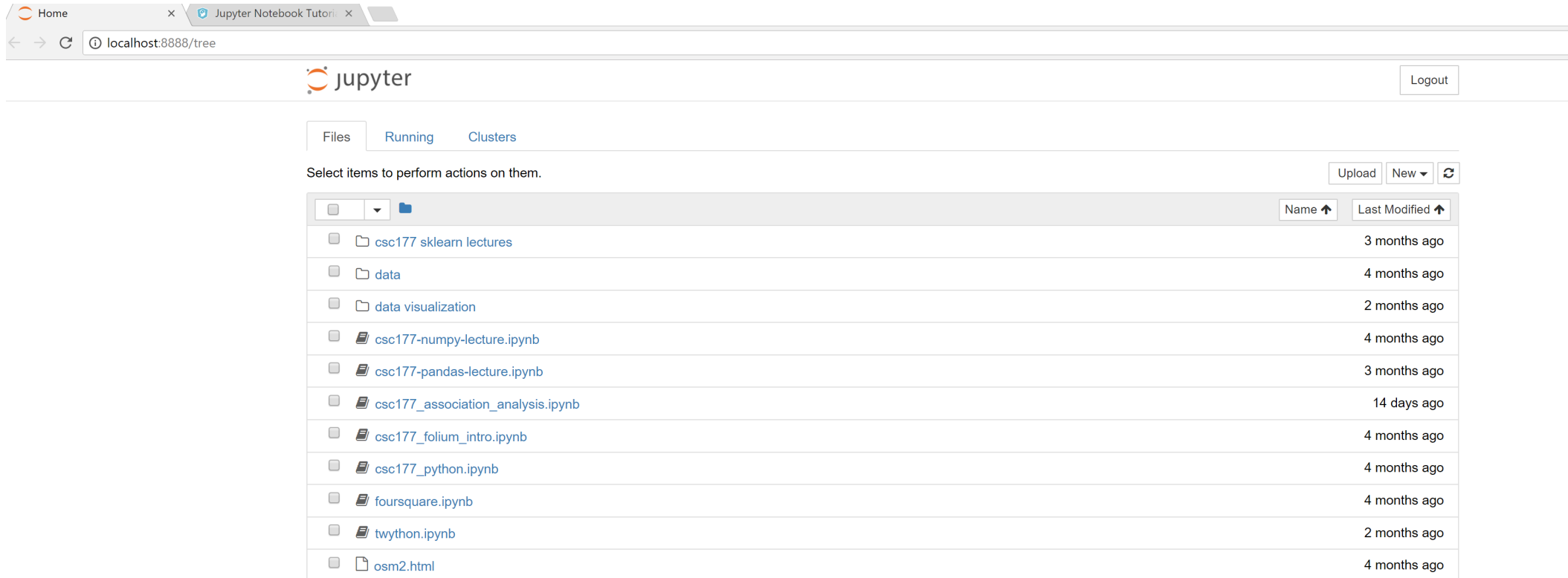
- Run the following command to open up the application:
jupyter notebook

How To Open Jupyter Notebooks (option 2)



```
Windows PowerShell
PS G:\Spring 2018\CSC177-01\Sandbox-CSC177 Jupyter Notebooks> jupyter notebook
```


Then you'll see the application running in the web browser on the address: `http://localhost:8888`.



The screenshot displays the Jupyter Notebook web interface. The browser's address bar shows `localhost:8888/tree`. The Jupyter logo is in the top left, and a 'Logout' button is in the top right. Below the header, there are three tabs: 'Files' (selected), 'Running', and 'Clusters'. A message 'Select items to perform actions on them.' is displayed above a table of files. The table has columns for 'Name' and 'Last Modified'. The files listed are:

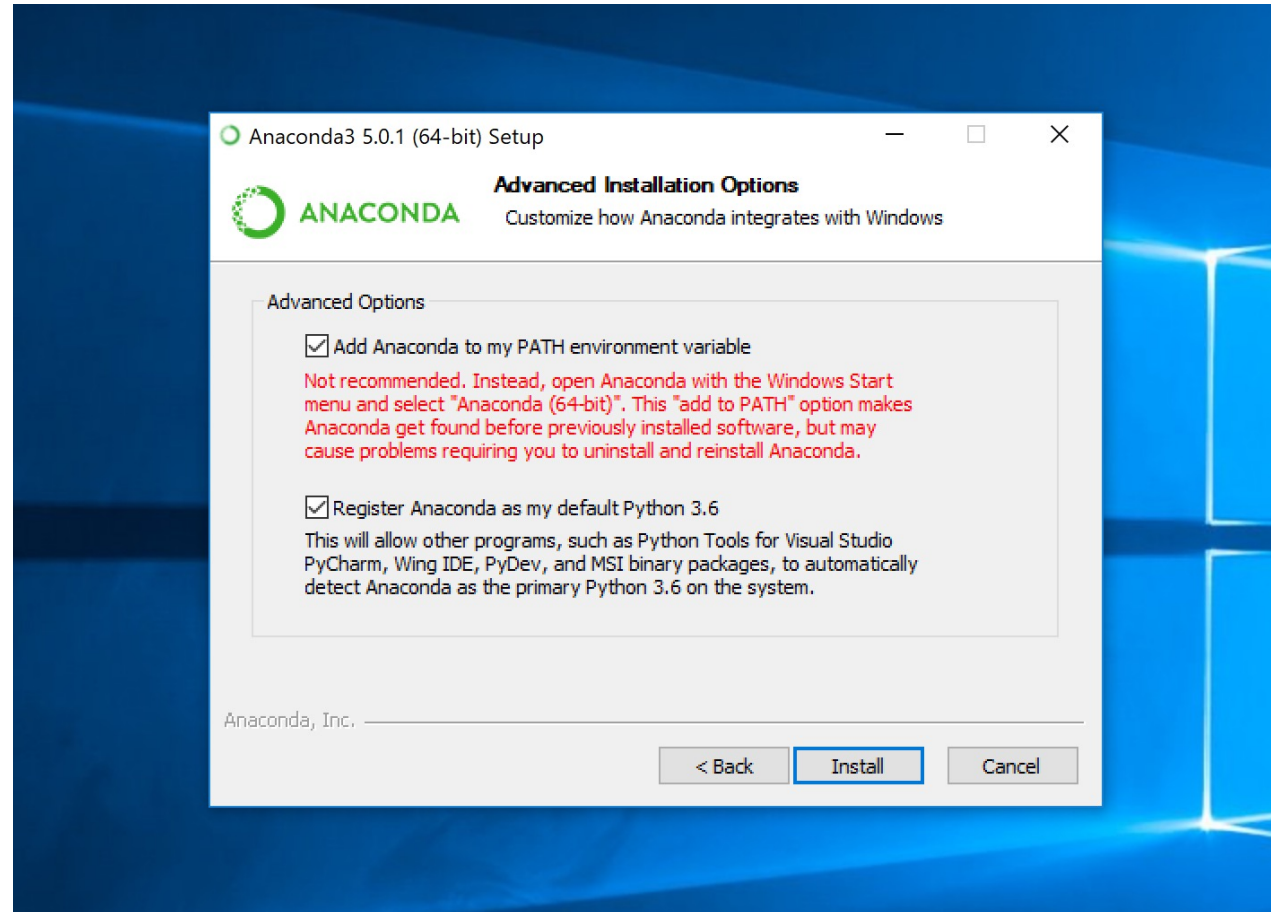
Name	Last Modified
<input type="checkbox"/> csc177 sklearn lectures	3 months ago
<input type="checkbox"/> data	4 months ago
<input type="checkbox"/> data visualization	2 months ago
<input type="checkbox"/> csc177-numpy-lecture.ipynb	4 months ago
<input type="checkbox"/> csc177-pandas-lecture.ipynb	3 months ago
<input type="checkbox"/> csc177_association_analysis.ipynb	14 days ago
<input type="checkbox"/> csc177_folium_intro.ipynb	4 months ago
<input type="checkbox"/> csc177_python.ipynb	4 months ago
<input type="checkbox"/> foursquare.ipynb	4 months ago
<input type="checkbox"/> twython.ipynb	2 months ago
<input type="checkbox"/> osm2.html	4 months ago

If you got this...

```
Windows PowerShell
PS G:\Spring 2018\CSC177-01\Sandbox-CSC177 Jupyter Notebooks> jupyter notebook
jupyter : The term 'jupyter' is not recognized as the name of a cmdlet, function, script file, or operat
Check the spelling of the name, or if a path was included, verify that the path is correct and try again
At line:1 char:1
+ jupyter notebook
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (jupyter:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS G:\Spring 2018\CSC177-01\Sandbox-CSC177 Jupyter Notebooks>
```

Make sure you added anaconda to PATH environment variable



Jupyter notebook has two types of cells

- Code cell: where you run your Python code
- Markdown cell: where you insert text/image/figure/audio/video

How to run each cell?

Executing cells

Shortcut	Description
<code>Ctrl</code> + <code>Enter</code>	run selected cell
<code>Shift</code> + <code>Enter</code>	run selected cell & select next cell
<code>Alt</code> + <code>Enter</code>	run selected cell & insert next cell

Each cell has two input modes

- Each Jupyter notebook cell has two different keyboard input modes.
 - **Edit mode** allows you to type **code/text into a cell** and is indicated by a green cell border.
 - **Command mode** binds the keyboard to notebook level actions and is indicated by a grey cell border.

Keyboard shortcuts for edit mode

Only in Edit Mode

Press `Enter` to enter the `Edit Mode`

Shortcut	Description
<code>Tab</code> / <code>Shift</code> + <code>Tab</code>	indent selected code block
<code>Ctrl</code> + <code>Z</code> / <code>Ctrl</code> + <code>Shift</code> + <code>Z</code>	undo / redo
<code>Ctrl</code> + <code>/</code>	toggle comments

Keyboard shortcuts for command mode

Only in Command Mode

Press `Esc` to enter the `Command Mode`

Shortcut	Description
<code>Y</code> / <code>M</code> / <code>R</code>	change the type of current cell to code / markdown / raw
<code>1</code> , <code>2</code> , <code>3</code> , .. <code>6</code>	to heading 1,2,3..6
<code>A</code> / <code>B</code>	insert cell above / below
<code>X</code> / <code>C</code>	cut / copy current cell
<code>D</code> <code>D</code>	delete current cell
<code>V</code> / <code>Shift</code> + <code>V</code>	paste cell below / above