

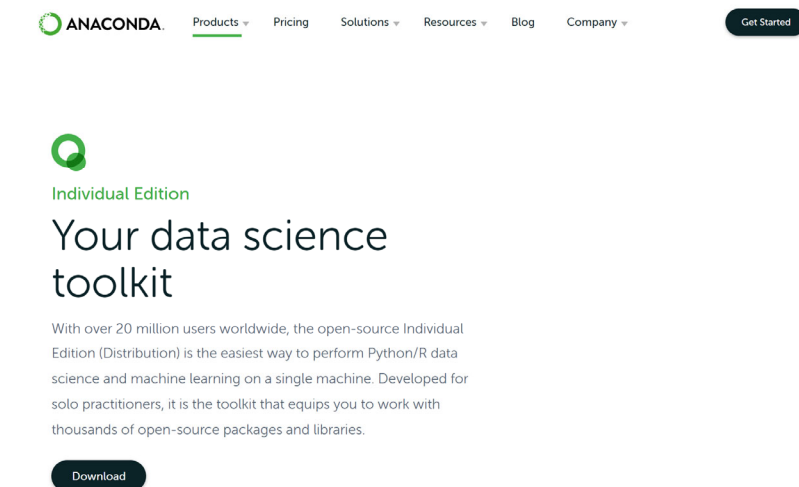
Jupyter Notebooks

Initial Setup



To open and work with a Jupyter Notebook, we recommend that you download and install ANACONDA, which is a data science toolkit that makes getting started with notebooks easy.

Visit: <https://www.anaconda.com/products/individual> and click on Download



The page will take you to the Installer section. Download the correct Anaconda installer for your platform from the links shown on the website. For Windows devices and MacBooks built from 2015 on, the 64-Bit Graphical Installer should be appropriate, otherwise select the 32-Bit installer:



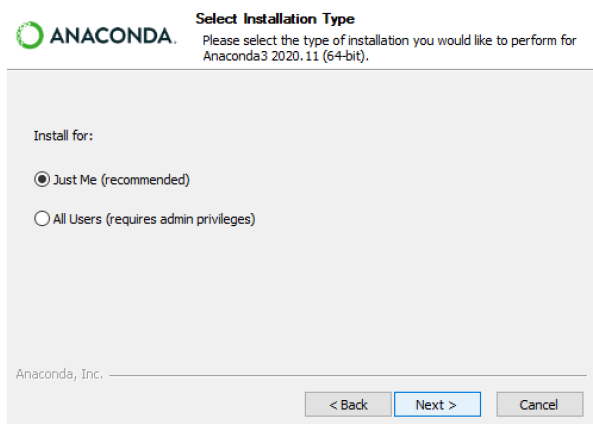
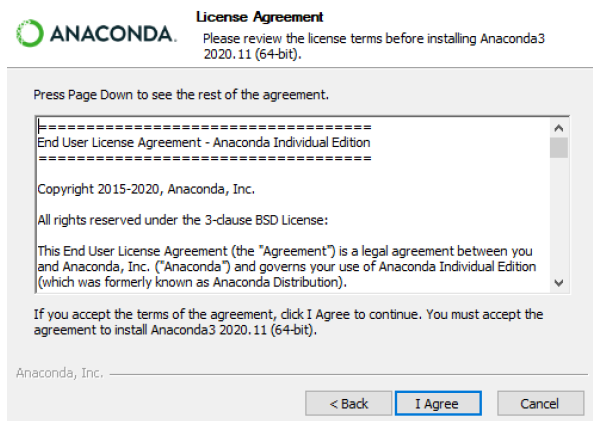
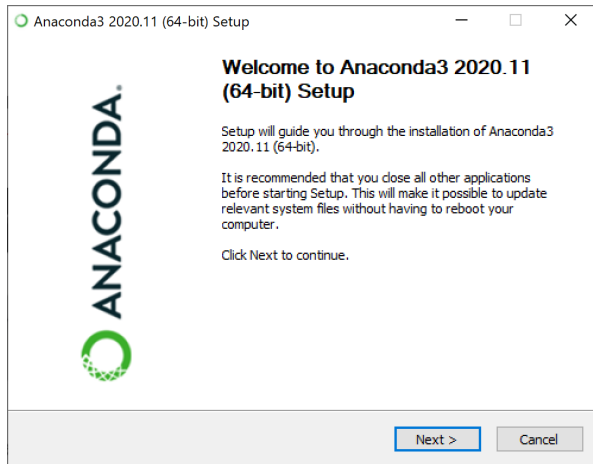
After downloading, run the installer and follow the installation prompts. If you are unable to install the software, contact your organization's IT department for assistance. Anaconda will need the ability to run a local server as part of its normal operation and communicate with your default web browser.

Continued, next page:

We highly recommend you accept the default settings as you walk through the installer:

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Choose Install Location

Choose the folder in which to install Anaconda3 2020.11 (64-bit).

Setup will install Anaconda3 2020.11 (64-bit) in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.

Destination Folder

C:\Users\mark\anaconda3

Browse...

Space required: 2.7GB

Space available: 100.3GB

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Next >

Cancel



Advanced Installation Options

Customize how Anaconda integrates with Windows

Advanced Options

Add Anaconda3 to my PATH environment variable

Not recommended. Instead, open Anaconda3 with the Windows Start menu and select "Anaconda (64-bit)". This "add to PATH" option makes Anaconda get found before previously installed software, but may cause problems requiring you to uninstall and reinstall Anaconda.

Register Anaconda3 as my default Python 3.8

This will allow other programs, such as Python Tools for Visual Studio, PyCharm, Wing IDE, PyDev, and MSI binary packages, to automatically detect Anaconda as the primary Python 3.8 on the system.

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Install

Cancel



Installing

Please wait while Anaconda3 2020.11 (64-bit) is being installed.

Extract: repodata_record.json

Show details

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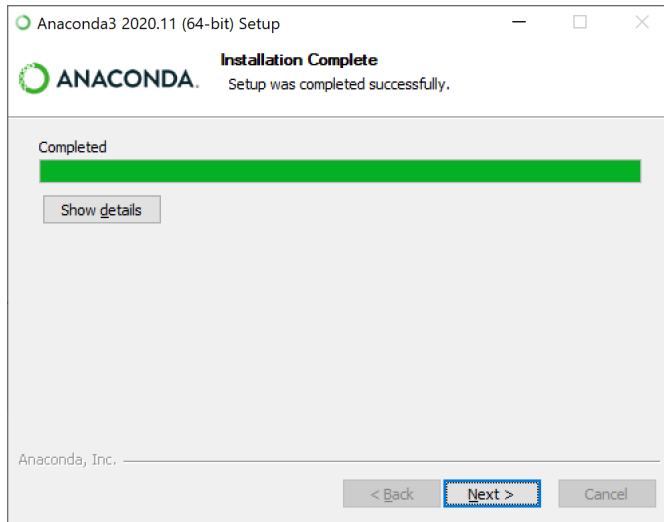
< Back

Next >

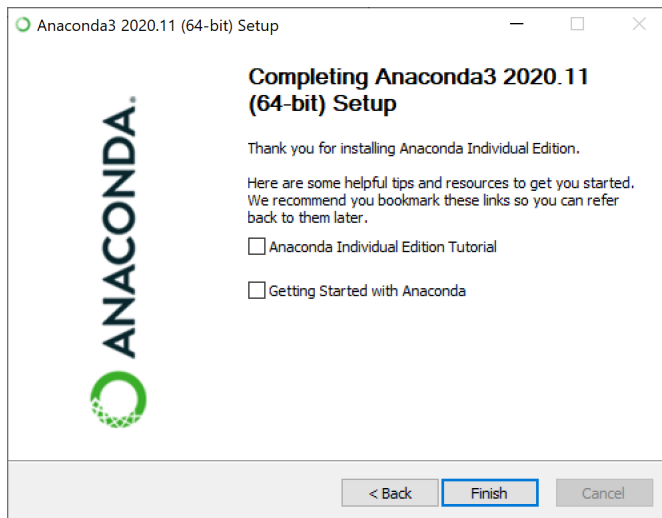
Cancel

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At the final page of the installer, feel free to uncheck the tutorial and learn more boxes, then click Finish:

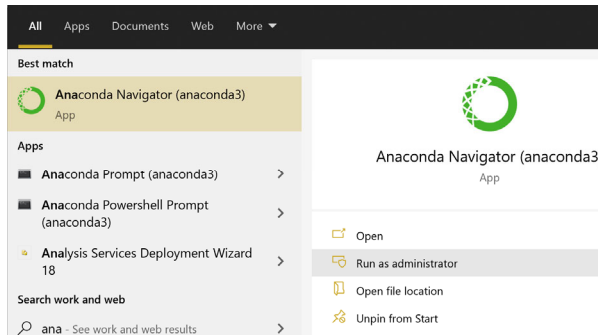


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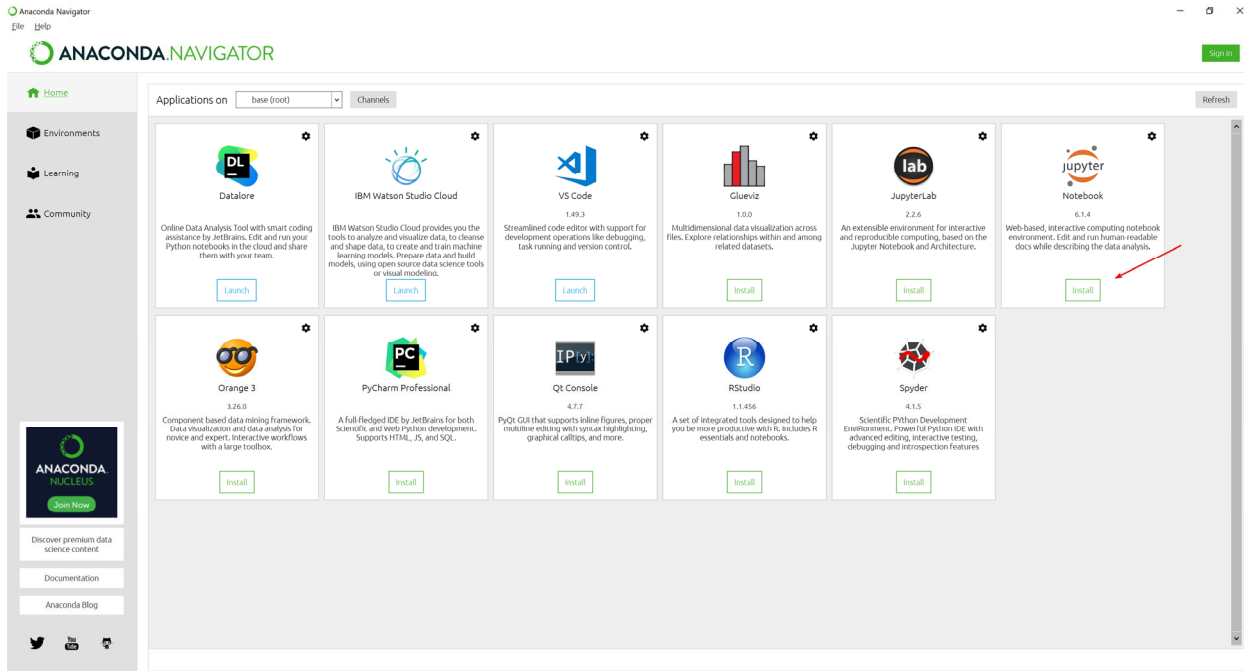
To Launch Anaconda

For windows platforms, click on the WINDOWS key and Type Anaconda until the application shows:



Click on the Anaconda Navigator

Anaconda will take a moment or two to start, then you will be presented with the following choices:



Select the Install button beneath Jupyter Notebook

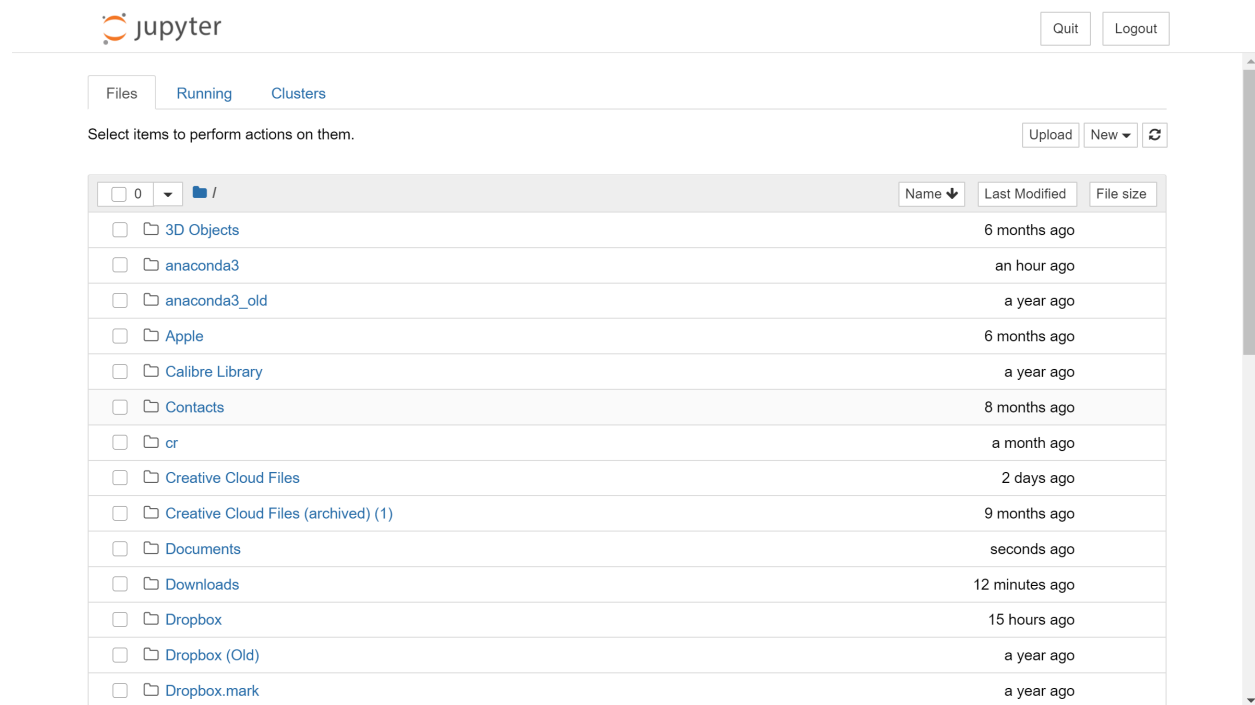
After a few moments, the button will change from "Install" to "Launch"

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Jupyter Notebook will launch in your browser and appear similar to this:



Using the interface, open the folder containing your Jupyter notebook:

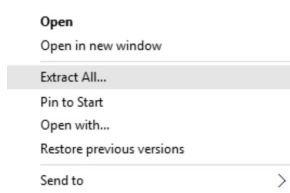


If you have not already unzipped your notebook from its zip container, open a regular Windows (or Mac) folder window elsewhere and unzip, then return to the Jupyter interface above.

In Windows, right click the folder and select Extract all.

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Initial Setup



On a Mac, double click the zip file to extract.

Make note of where you extracted your file to.

Returning to the Jupyter notebook interface, click on the file indicated:

	Name	Last Modified	File size
<input type="checkbox"/>	..	seconds ago	
<input type="checkbox"/>	IISExpress	5 months ago	
<input type="checkbox"/>	My Web Sites	5 months ago	
<input type="checkbox"/>	SQL Server Management Studio	6 minutes ago	
<input type="checkbox"/>	Jupyter, Working with Research Data.ipynb	9 days ago	219 kB
<input type="checkbox"/>	Jupyter_Working_with_Research_Data.zip	9 days ago	31.6 kB
<input type="checkbox"/>	sort-test.txt	a year ago	302 B

This will open your notebook:

The screenshot shows the Jupyter notebook interface for the file "Jupyter, Working with Research Data". The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a main workspace. The workspace contains two code cells. The first cell, labeled "In [1]:", contains the code to import numpy and pandas. The second cell, labeled "In [2]:", contains code to create a Pandas DataFrame with columns for GVKEY, FYEAR, TIC, Earn, and Price. The output of the second cell, labeled "Out[2]:", is a table showing the DataFrame's contents.

```
In [1]: import numpy as np
import pandas as pd
```

The Pandas DataFrame

```
In [2]: dfGM = pd.DataFrame({'GVKEY': '005073',
                           'FYEAR': np.arange(2013, 2018), # creates a numerical array of specified values
                           'TIC': 'GM',
                           'Earn': [5346.0, 3949, 9687, 9427, 348],
                           'Price': [40.87, 34.91, 34.01, 34.84, 40.99]})
dfGM
```

Out[2]:

	GVKEY	FYEAR	TIC	Earn	Price
0	005073	2013	GM	5346.0	40.87
1	005073	2014	GM	3949.0	34.91
2	005073	2015	GM	9687.0	34.01
3	005073	2016	GM	9427.0	34.84
4	005073	2017	GM	348.0	40.99

The Pandas Series