PYOTE installation (Windows only)

1 December 2018

If you are installing Anaconda/PYOTE for the first time, the following discussion is not relevant. Skip ahead to step 2 of the installation outline.

Recently, a new version of Python has been released as the Python 3.7 series.

PYOTE has been adapted to use this new version of Python. What this means to existing PYOTE users is that they will not be able to get/benefit from future updates to PYOTE as long as they continue to use Python 3.6. When they start using Python 3.7, updates will resume automatically.

There are already 2 updates to PYOTE available to Python 3.7 users:

1. A vertical splitter between the commands/plot section and the table/report section got lost during some update in the past; this gui feature has been restored.

2. An automatic generation of the files needed to enable a user to easily create a desktop icon for starting PYOTE has been added.

I have experimented with simply updating Python 3.6 to Python 3.7 in an existing installation. But the number of files that have to change is very large. In my opinion it is easier, safer, and more trouble-free to reinstall Anaconda with the latest Python version already included. These instructions are based on that belief.

Outline of installation:

1. If you have a previous Anaconda3 installation, uninstall it by executing the file:

   C:\Anaconda3\Uninstall-Anaconda3.exe

   This assumes that you installed Anaconda in our recommended folder rather than the default folder that Anaconda suggests.

2. Install the Python 3.7 version of Anaconda from their website into the folder

   C:\Anaconda3

   Note !! This is a deviation from the default installation folder suggested by Anaconda. It is important that this folder be used because the desktop icon that is included with PYOTE has C:\Anaconda3 hard-coded in its batch file as the Anaconda installation directory.

3. Install PYOTE from the Internet (requires opening the app Anaconda Prompt which will have been installed during step 2).

4. Test the PYOTE installation from the Anaconda Prompt window. This both confirms that PYOTE is working on your machine and in addition writes a little batch file into C:\Anaconda3 that will be used to create a desktop icon for PYOTE.

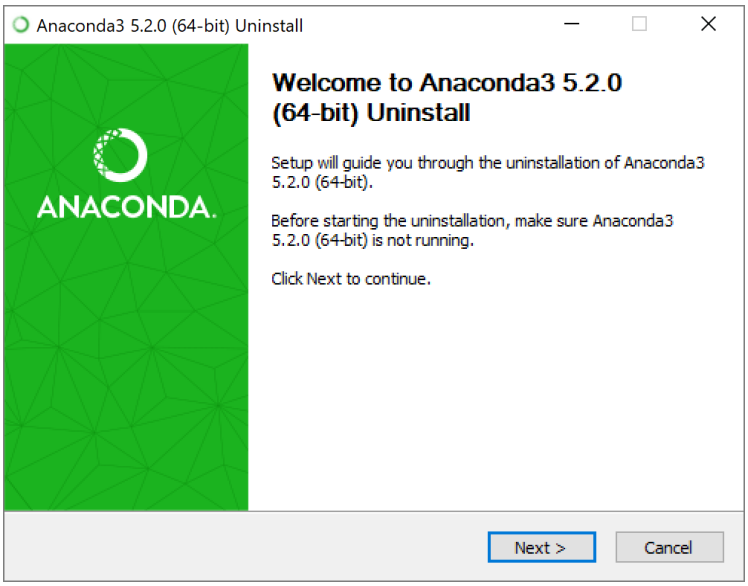
5. Add desktop icon to simplify starting up PYOTE

Installation: step-by-step in detail

Step 1: Uninstall (if needed) the existing Anaconda installation. The file to execute is

C:\Anaconda\Uninstall-Anaconda3.exe

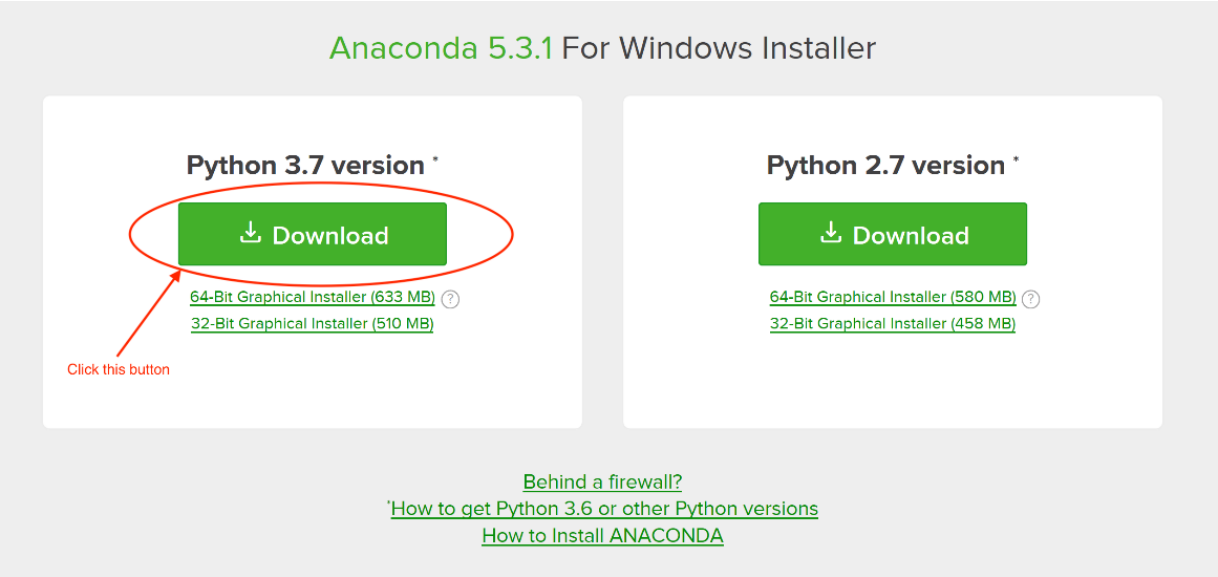
You should see the following panel appear. Follow the instructions; there are no significant choices to be made.



Step 2: Install Anaconda from Internet.

Go to **https://www.anaconda.com/download**

You will see a page that includes the following (you may have to scroll down to see it):



Click on the Python 3.7 version Download button.

Place the 'installer' in your Downloads folder rather than run it immediately. There are two reasons for this:

1. If a re-install is needed, you won't have to wait for a new download.

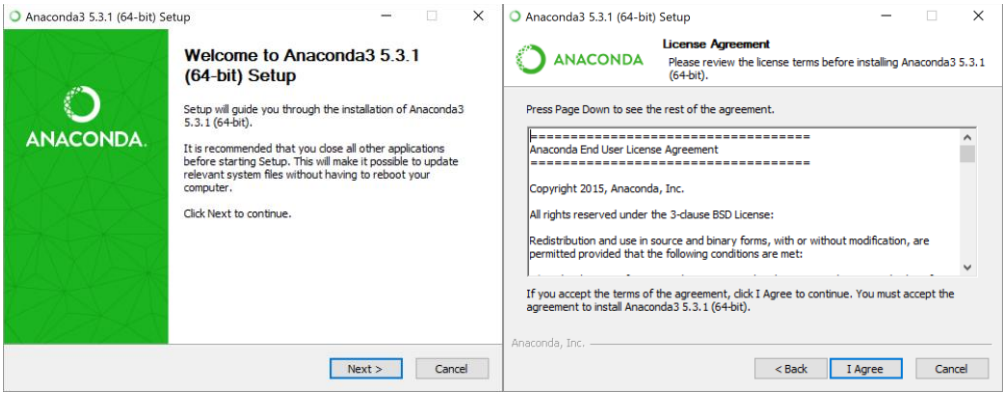
2. It gives you an option to open and run the installer as Administrator, which I have found to be the most trouble-free way to do the install.

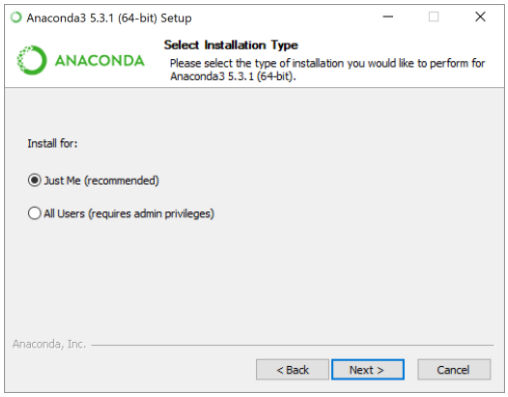
After the download completes, find the file, right-click on it, and select

Run as Administrator

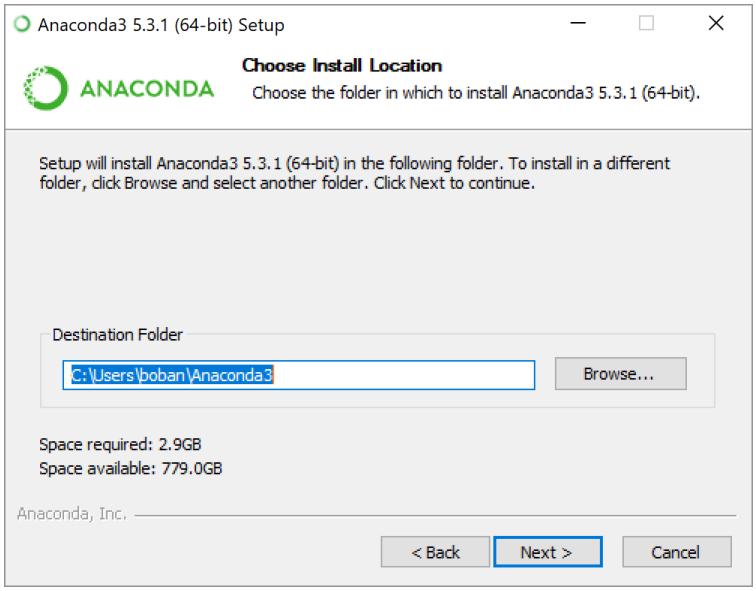
I found that sometimes Windows wouldn't let me install to the directory I wanted to because of a 'permission' problem. Sometimes it would, sometimes it wouldn't. So, I recommend running the installer as Administrator if possible.

Below is a screen-by-screen 'movie' of my 'install'.

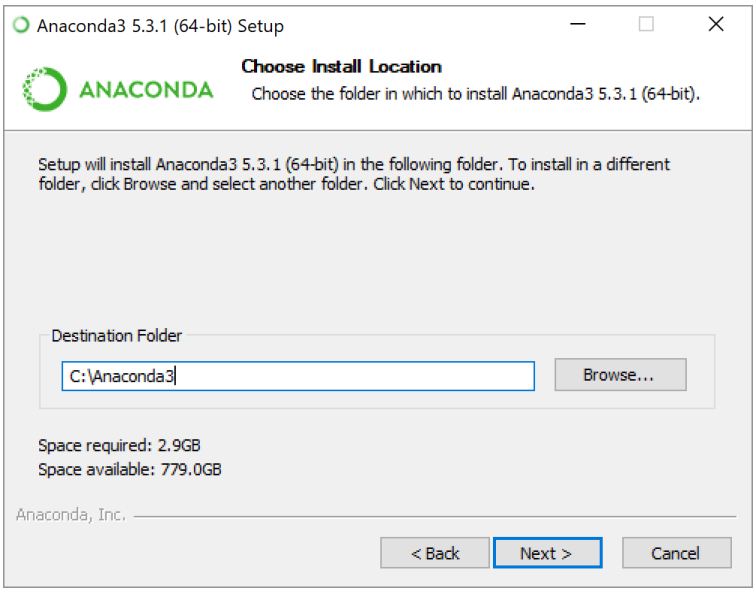




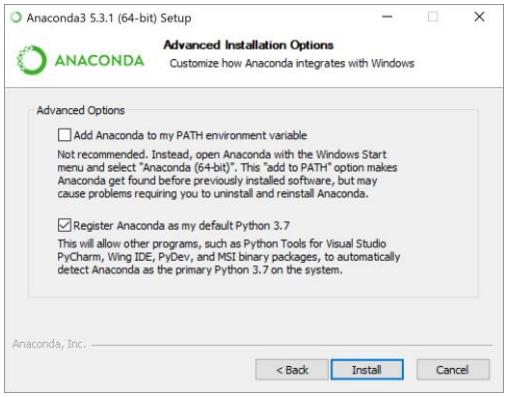
Note: If you are running the install as Administrator, you will have a choice to make in the above panel. If you're the only user on your computer, selecting Just Me is fine.

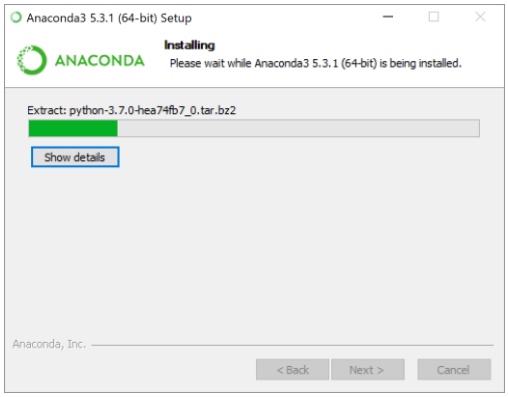


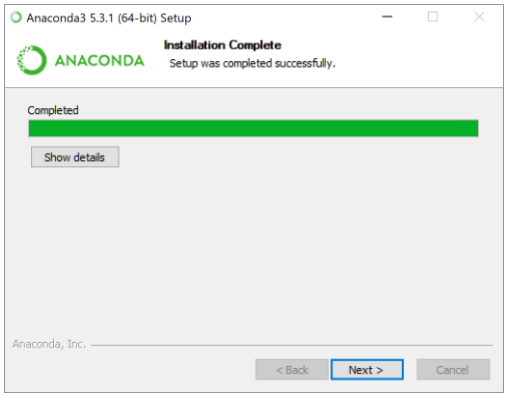
On the above panel, DO NOT ACCEPT THE DEFAULT! CHANGE IT TO: C:\Anaconda3 as shown below:

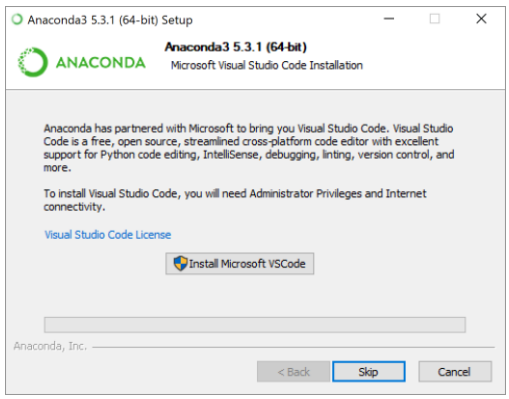


PYOTE assumes that Anaconda is installed in this directory in order to manufacture the files needed to support the desktop icon.

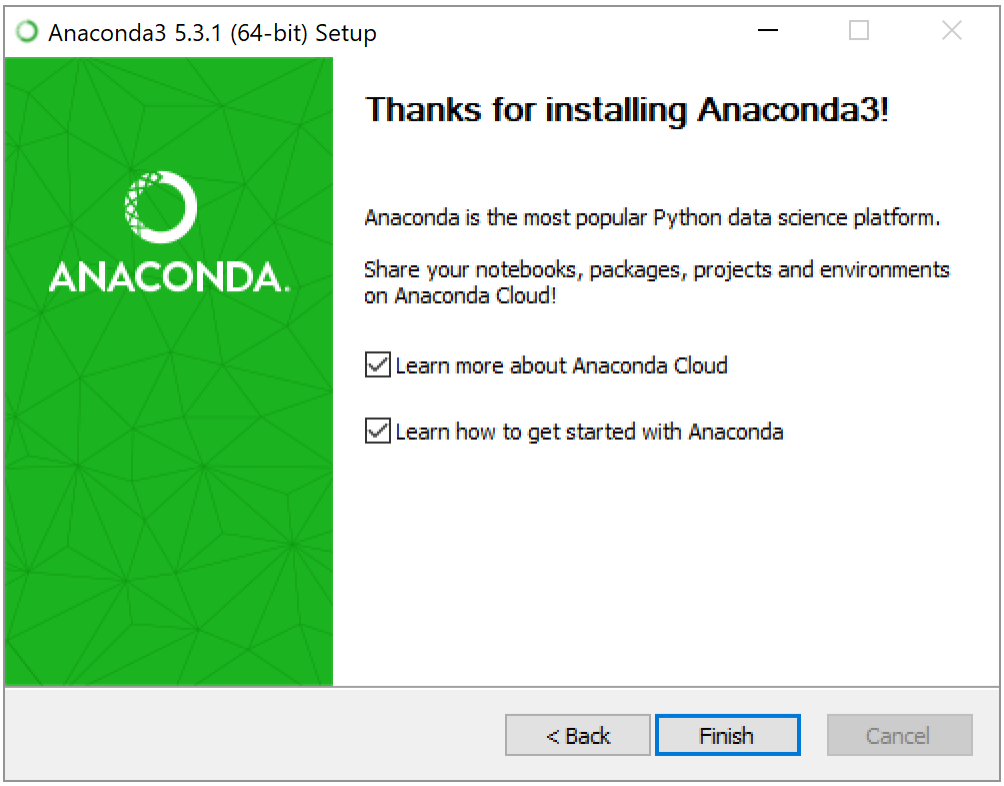








And you should be rewarded with the final screen. Uncheck the ‘Learn about’ boxes and click Finish.

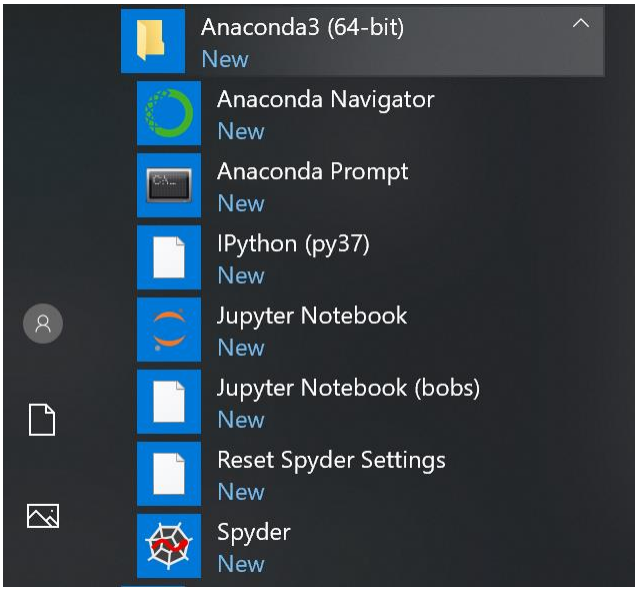


Step 3: Install PYOTE from Internet (i.e., from the PyPI repository).

Open the ‘Anaconda Prompt’ console app. To find this app, click on the Windows Start Menu in the lower left corner of your Windows screen, open the ‘All Programs’ menu, find the Anaconda3 folder, open the drop-down list and click on the Anaconda Prompt.

Note: Do not use the Windows Command Prompt (cmd.exe) window. The pip commands that we use to install PYOTE will not work from there.

Here is a screen shot of where to find the Anaconda Prompt:



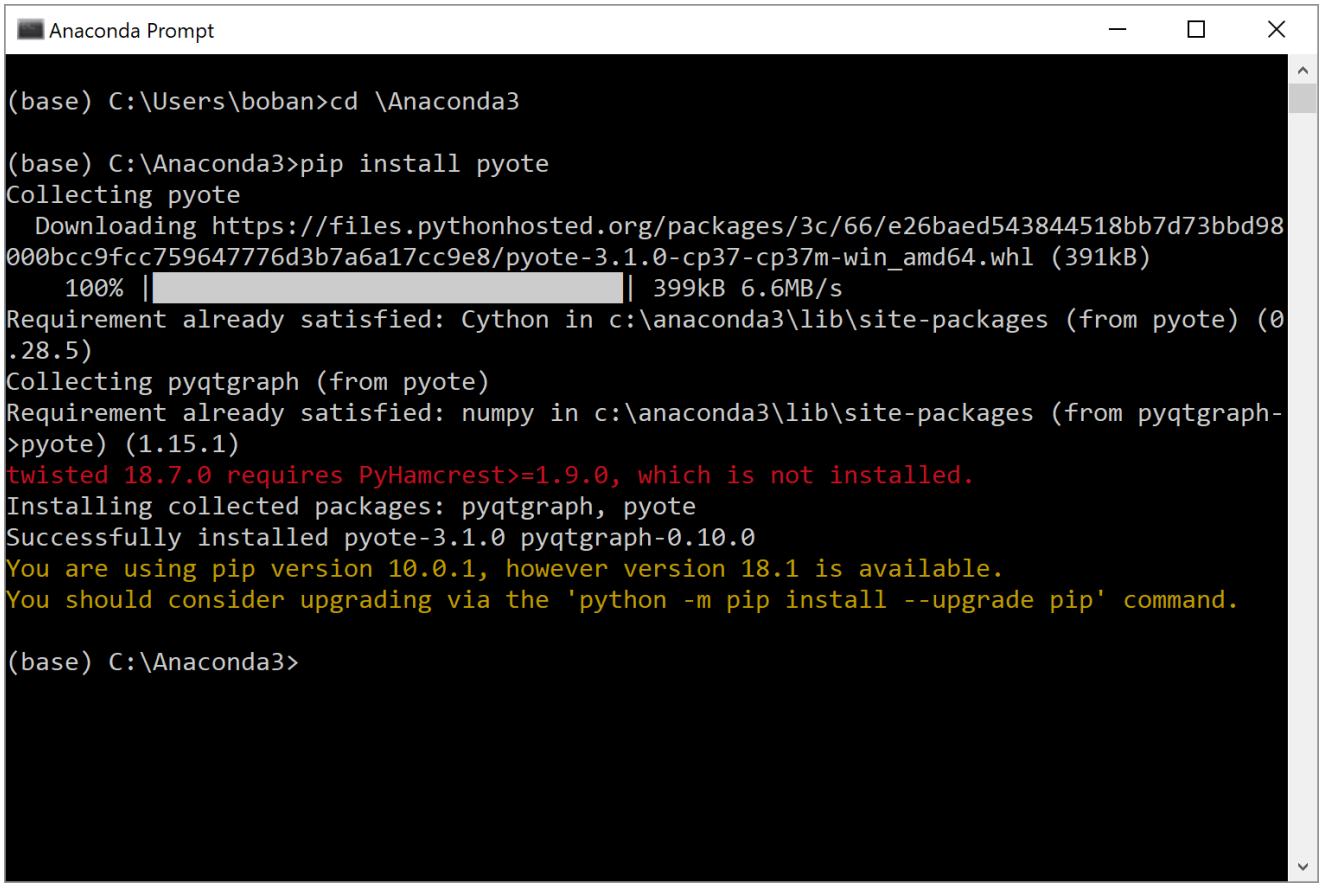
The above is for Windows 10, but Windows 7 will look similar.

The Anaconda Prompt window may sit idle for quite a while, while it searches your computer for Python environments. Wait for the > prompt to appear.

At the prompt, type cd \Anaconda3. This is done so that, in a later step where you startup PYOTE and resize and relocate it on your screen, those values will be saved in the correct place for future runs of the program.

Your Anaconda Prompt window should now look like this:

Next, type **pip install pyote** as shown below (your screen may differ in the section before the prompt character), then press enter to get:



Note that there may/will be a few strange looking messages, but the line:

Successfully installed pyote-3.1.0

tells us that the PYOTE install worked.

Step 4: Run and Test PYOTE installation.

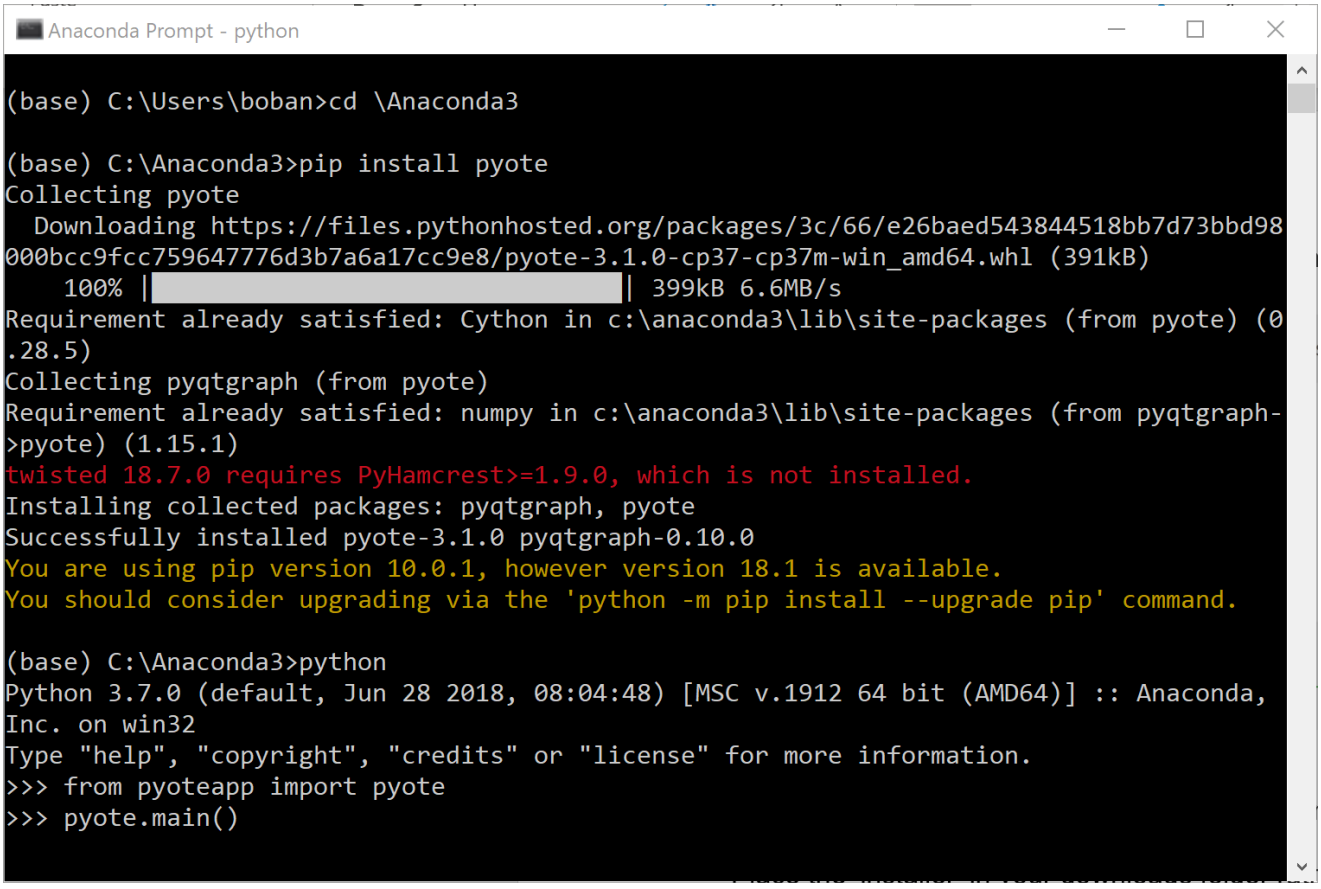
Use the already open ‘Anaconda Prompt’ and enter the following:

On the first line after the > prompt type: **python**
After you get the >>> prompt type: **from pyoteapp import pyote**

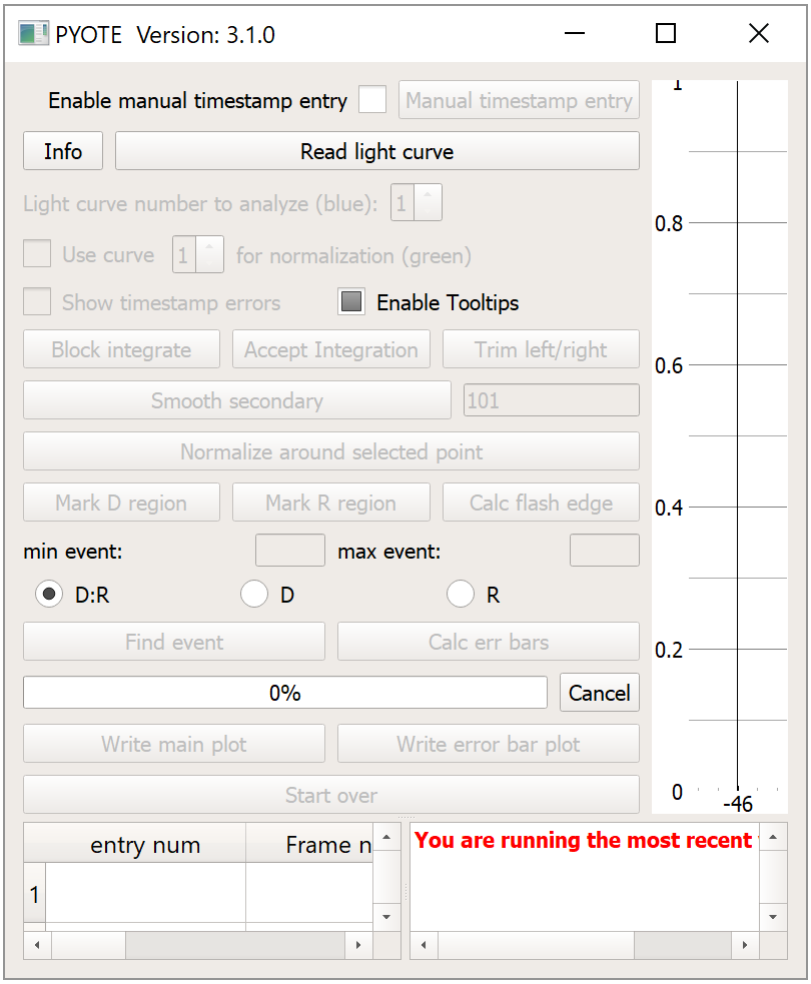
You will have to wait a while for this import to complete because python is busy compiling the source code into byte code. The resulting byte code is cached, so this is a one-time only delay.

After you get the >>> prompt type: **pyote.main()**

On the initial run/import of PYOTE, it is compiling the source code into byte code and so may take 30 seconds or so. It will be much faster on subsequent runs. Your window will look similar to that below:

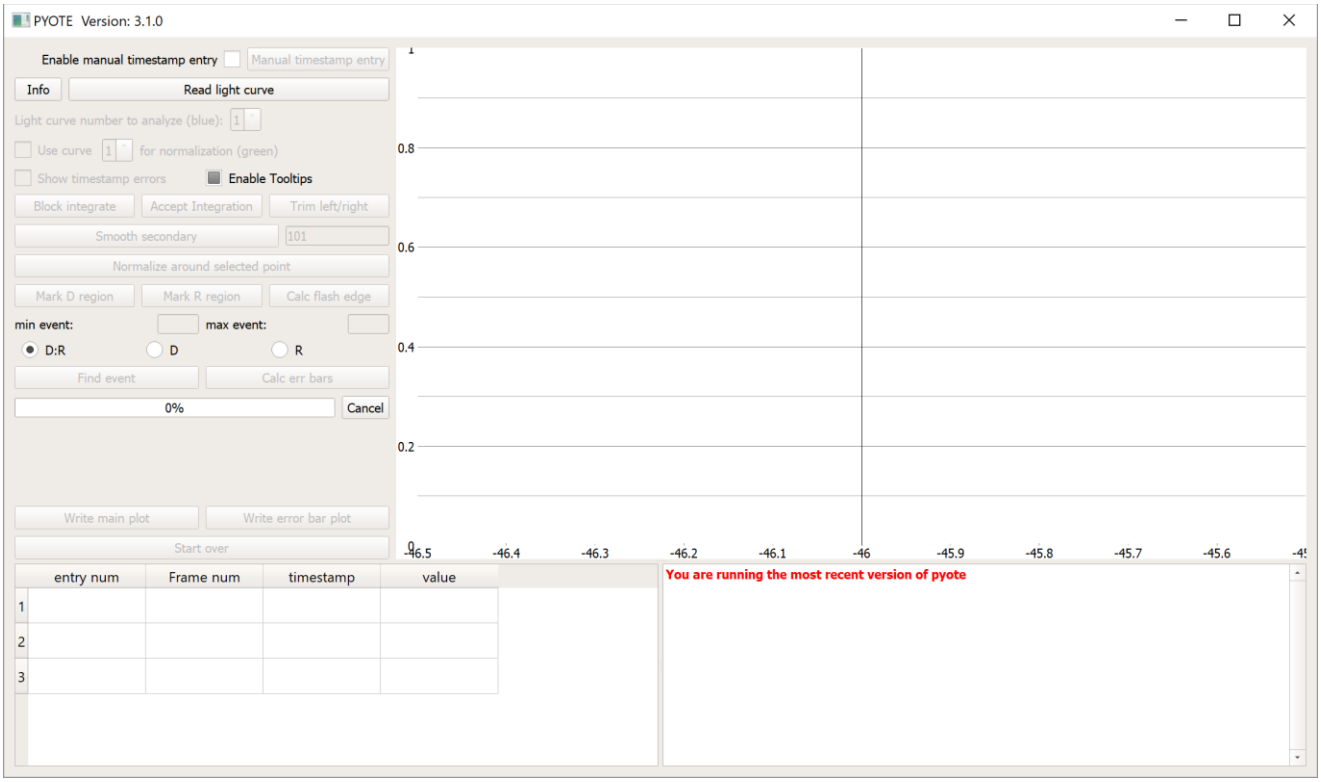


And PYOTE should start up in a few seconds looking something like the screen grab shown below:



The size and position of the PYOTE window can/should now be adjusted to best fit your screen size and resolution. Those settings will be remembered in C:\Anaconda3\simple-ote.ini.

Here is an example of a resized PYOTE window:



Note for future runs of PYOTE: If you are running the latest available version, the text in the PYOTE 'log' box at the bottom of the screen will read:

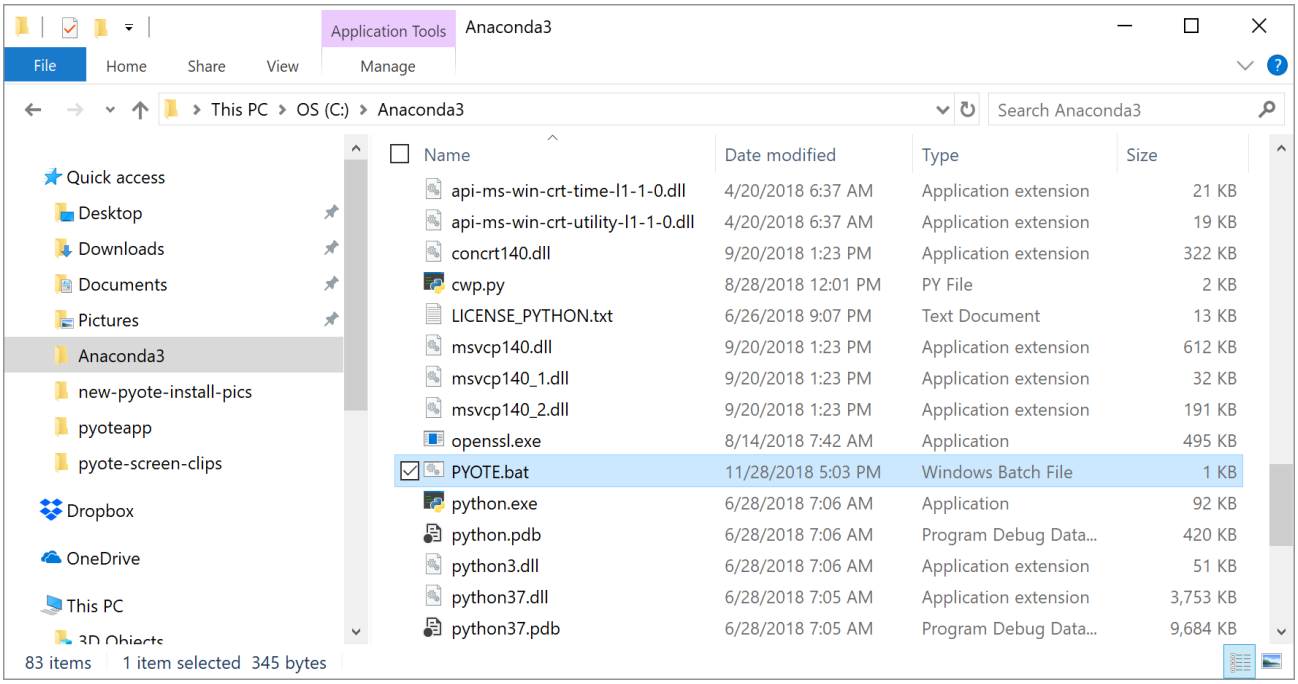
You are running the most recent version of pyote

If you don't have the most recent version, prior to PYOTE running, a prompt screen will appear asking you if you want to update to the new version. You can select 'Yes' or 'No'. If you select 'Yes', read the text in PYOTE 'log' box at the bottom of the screen and follow the instruction for restarting PYOTE.

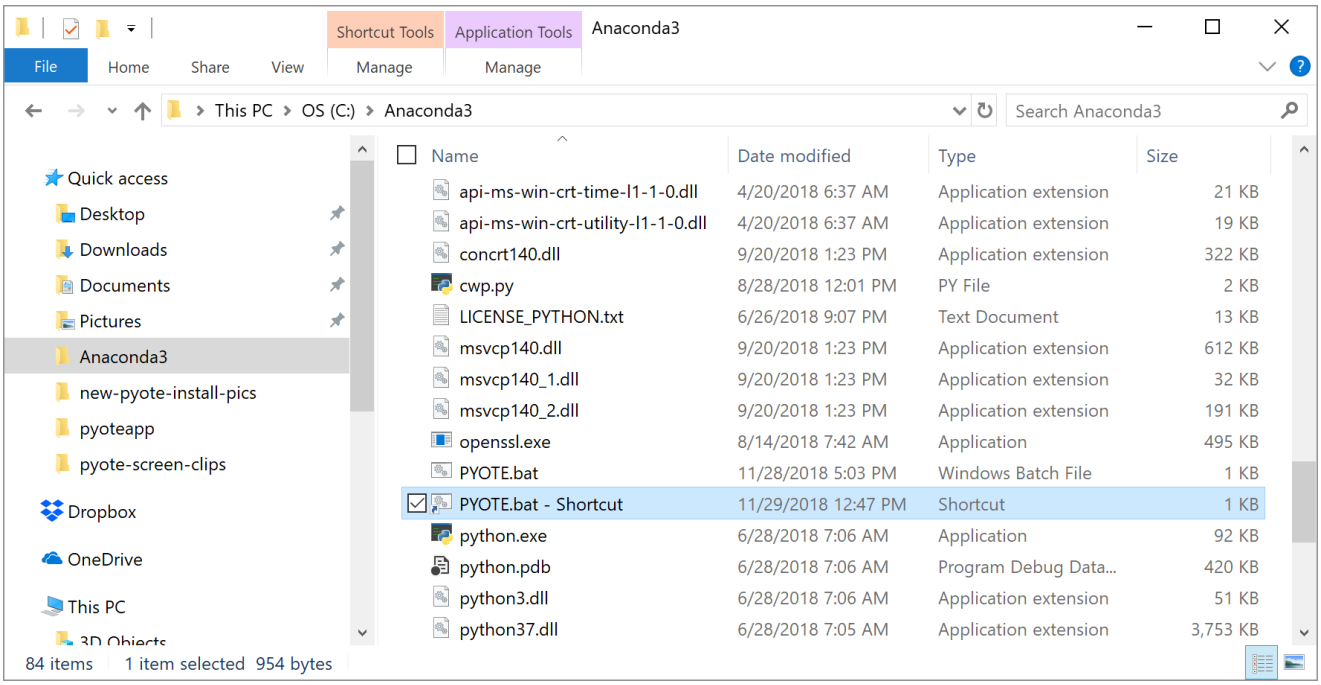
Step 5: Add desktop icon to simplify starting up PYOTE

Open File Explorer and navigate to the C:\Anaconda3 directory.

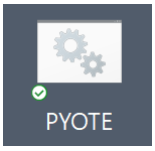
Locate the file PYOTE.bat (you may not see the .bat extension if you have not enabled their display). Its type is Windows Batch File as shown below (if this file is not present, you have not yet run pyote --- it creates this file (but only if not already present):


Application Tools
Anaconda3
File
Home
Share
View
Manage
This PC › OS (C:) › Anaconda3
Search Anaconda3
Quick access
Desktop
Downloads
Documents
Pictures
Anaconda3
new-pyote-install-pics
pyoteapp
pyote-screen-clips
Dropbox
OneDrive
This PC
Name
Date modified
Type
Size
api-ms-win-crt-time-l1-1-0.dll 4/20/2018 6:37 AM Application extension 21 KB
api-ms-win-crt-utility-l1-1-0.dll 4/20/2018 6:37 AM Application extension 19 KB
concrt140.dll 9/20/2018 1:23 PM Application extension 322 KB
cwp.py 8/28/2018 12:01 PM PY File 2 KB
LICENSE_PYTHON.txt 6/26/2018 9:07 PM Text Document 13 KB
msvcp140.dll 9/20/2018 1:23 PM Application extension 612 KB
msvcp140_1.dll 9/20/2018 1:23 PM Application extension 32 KB
msvcp140_2.dll 9/20/2018 1:23 PM Application extension 191 KB
openssl.exe 8/14/2018 7:42 AM Application 495 KB
PYOTE.bat 11/28/2018 5:03 PM Windows Batch File 1 KB
python.exe 6/28/2018 7:06 AM Application 92 KB
python.pdb 6/28/2018 7:06 AM Program Debug Data... 420 KB
python3.dll 6/28/2018 7:06 AM Application extension 51 KB
python37.dll 6/28/2018 7:05 AM Application extension 3,753 KB
python37.pdb 6/28/2018 7:05 AM Program Debug Data... 9,684 KB
83 items
1 item selected 345 bytes

Right-click on the highlighted file and select Create Shortcut. The result will be:



Drag the resulting “PYOTE – Shortcut” file (highlighted above) to your desktop. Below is a clip of what my icon looks like (I edited the name to simply PYOTE):



Double-clicking that icon will now start up PYOTE.

It is possible to change the icon picture itself by right-clicking on the icon, selecting ‘properties’, and in the Shortcut tab, clicking on Change icon.

Congratulations, you have now installed PYOTE. User instructions are provided in text boxes that appear when you ‘hover’ the cursor over a menu selection. Note that menu items only become active when certain previous operations have been done. Not much is active until a .csv file for an occultation event has been opened. In general, hover your cursor over active menu items and read each menu selection text box carefully before executing any menu items. Once you have read all the text boxes, go ahead and proceed with your analysis of the .csv file light curve.

The help boxes that popup will quickly become an annoyance. You can disable that feature --- look for the checkbox that does this and click it. Its state is ‘sticky’ (retained between program runs).