

PyMovie/PyOTE installation (Windows 10 only)

[Note: PyMovie/PyOTE are written for 64-bit computers only]

December 3, 2020

Outline of installation (**this page is an outline only; detailed instructions start on page 2**):

1. Install the Anaconda3 Python 3.8 version of Anaconda from the download website.
2. Install PyMovie.
3. Install PyOTE.
4. Perform a test run of the PyMovie installation. This confirms that PyMovie is working on your machine and creates a batch file that will be used to create a desktop icon for PyMovie.
5. Perform a test run of the PyOTE installation. This confirms that PyOTE is working on your machine and creates a batch file that will be used to create a desktop icon for PyOTE.
6. Add desktop shortcuts to simplify starting up PyMovie and PyOTE

While the above outline is simple, some of the steps take a long time and need to be completed exactly as written in the detailed instructions. Be patient while Python 3.8 PyMovie and PyOTE download and installation is occurring, and you will have a successful installation.

Installation: step-by-step in detail

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

<C:\Anaconda3\Uninstall-Anaconda3.exe>

Step 2: Install Anaconda3 Python 3.8 (or later version) from Internet.

Google Anaconda3 download. You should find a site labeled Anaconda3 – Conda documentation. The URL for this site when these instructions were prepared is:

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

Somewhere farther down on the page you will see something that looks like the following:



Download the Python 3.8 WINDOWS (or later) version for your 64-bit computer (32-bit computers are not supported).

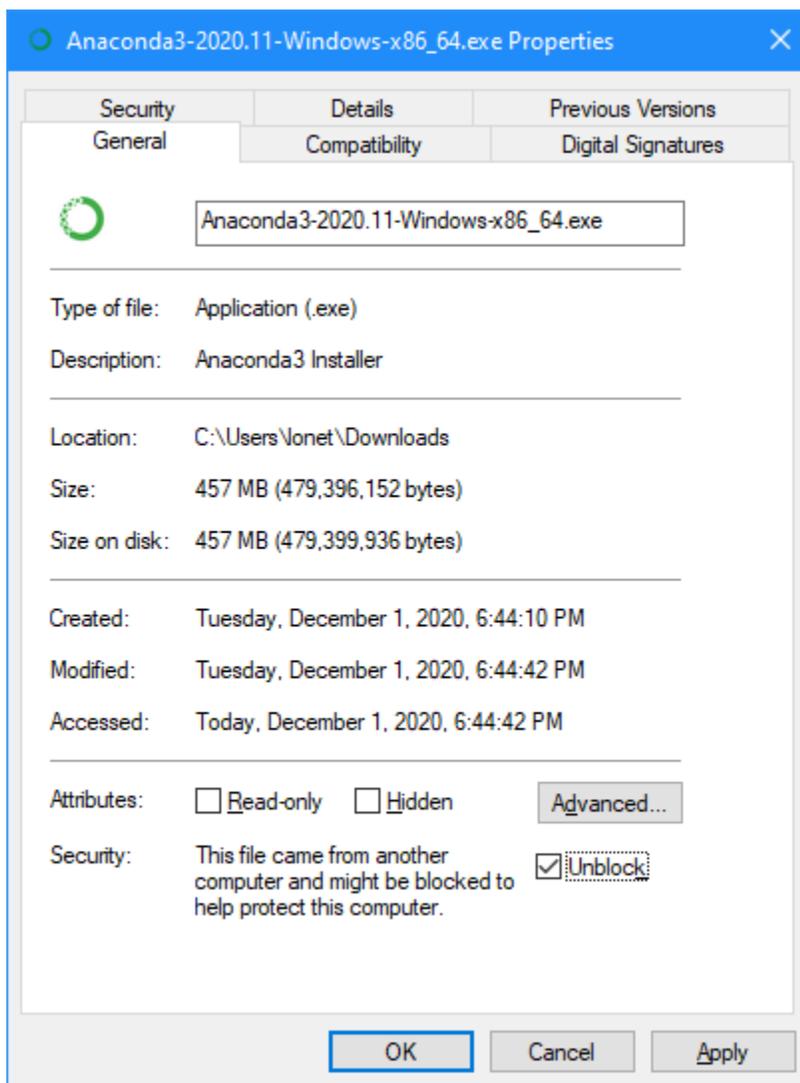
Save the 'installer' in your Downloads folder rather than run it immediately. There are two reasons for this:

1. If a re-install is needed, you will not have to wait for a new download.
2. It gives you an option to open and run the installer as Administrator, which is the most trouble-free way to do the install.

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

Properties

On the General tab, check to make sure the installer is not 'Blocked'. If blocked, check the 'Unblock' check box



Then click Apply and OK.

Next, on the installer file, right click on it and select:

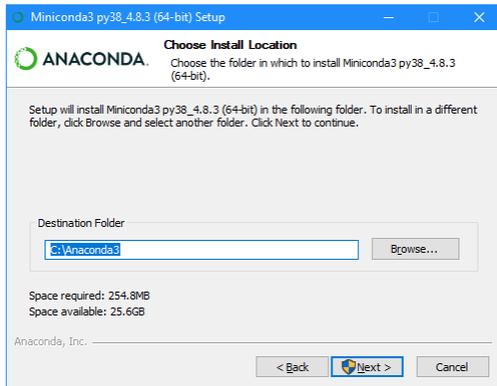
Run as Administrator

Click through the initial screens, as typical for installing software.

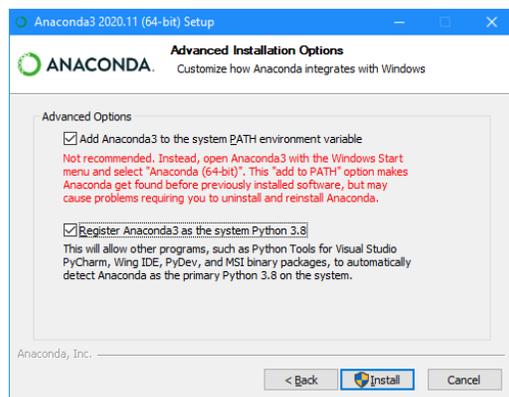
On the 'Select Installation Type' screen, check the radio button for: 'All Users (requires admin privileges)'

On the 'Choose Install Location' screen, set the installation directory to C:\Anaconda3

DO NOT ACCEPT THE DEFAULT. Change it to: **C:\Anaconda3** as shown.
It is imperative that you install in the C: drive root directory or the PyMovie/PyOTE desktop shortcut generator will not work and the auto-update feature will not work.



On the 'Advanced Installation Options' screen, check both boxes. These settings are required in spite of the cautionary message that is highlighted in red. These options ensure that auto-updates are applied in the correct directory, regardless of whether an Anaconda prompt window is used for Python commands.



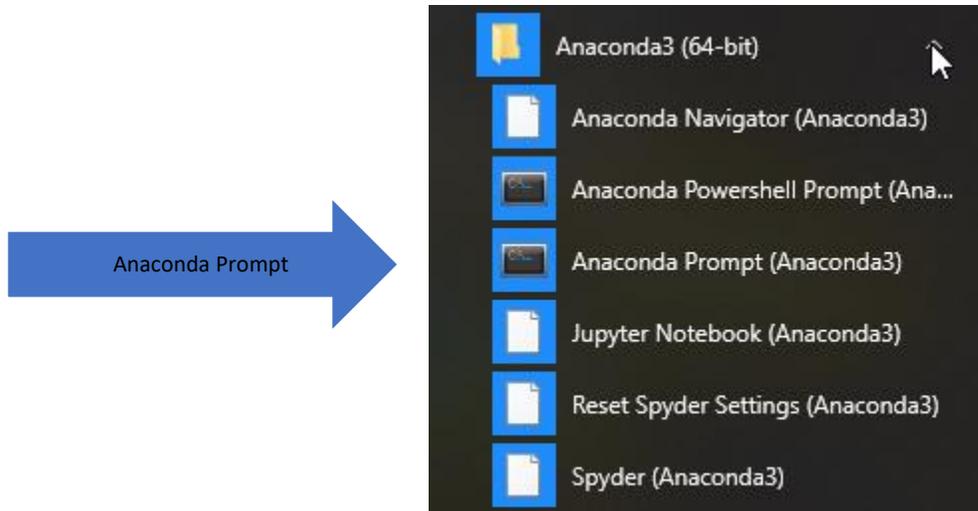
Press the 'Install' button, wait, patiently, and then click the 'Finish' button and you should be rewarded with the 'Installation Complete' screen. Click 'Next' to take you to the 'Completing Anaconda3' screen. Uncheck the 'Learn about' boxes and click Finish.

Step 3: Install PyMovie and PyOTE from the internet 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 (Anaconda3).

Here is a screen shot of where to find the Anaconda Prompt (Anaconda3):



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 c:\Anaconda3`. This is done so that, in a later step where you startup PyMovie 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:

```
Anaconda Prompt
(base) C:\Users\boban>cd \Anaconda3
(base) C:\Anaconda3>
```

Next, type `scripts\activate`, then press enter.

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

```
Anaconda Prompt (Anaconda3)
Collecting decorator>=4.3.0
  Using cached decorator-4.4.2-py2.py3-none-any.whl (9.2 kB)
Collecting PyYAML
  Using cached PyYAML-5.3.1-cp38-cp38-win_amd64.whl (219 kB)
Collecting jsonschema
  Using cached jsonschema-3.2.0-py2.py3-none-any.whl (56 kB)
Collecting soupsieve>=1.2
  Using cached soupsieve-2.0.1-py3-none-any.whl (32 kB)
Collecting webencodings
  Using cached webencodings-0.5.1-py2.py3-none-any.whl (11 kB)
Requirement already satisfied: urllib3!=1.25.0,!1.25.1,<1.26,>=1.21.1 in c:\anaconda3\lib\site-packages (from requests>=2.4.3->astroquery->pymovie) (1.25.8)
Requirement already satisfied: chardet<4,>=3.0.2 in c:\anaconda3\lib\site-packages (from requests>=2.4.3->astroquery->pymovie) (3.0.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\anaconda3\lib\site-packages (from requests>=2.4.3->astroquery->pymovie) (2020.4.5.1)
Requirement already satisfied: idna<3,>=2.5 in c:\anaconda3\lib\site-packages (from requests>=2.4.3->astroquery->pymovie) (2.9)
Collecting pywin32-ctypes!=0.1.0,!0.1.1; sys_platform == "win32"
  Using cached pywin32-ctypes-0.2.0-py2.py3-none-any.whl (28 kB)
Processing c:\users\lonet\appdata\local\pip\cache\wheels\17\be\0f\727fb20889ada6aaaba861f5f0eb21663533915429ad43f28\pyrsistent-0.16.0-cp38-cp38-win_amd64.whl
Collecting attrs>=17.4.0
  Using cached attrs-19.3.0-py2.py3-none-any.whl (39 kB)
Installing collected packages: numpy, Adv2, pillow, imageio, tiffiffe, decorator, networkx, scipy, PyWavelets, python-dateutil, pyparsing, kiwisolver, cycler, matplotlib, scikit-image, pypiwin32, opencv-python, pyqtgraph, PyQt5-sip, PyQt5, llvmlite, numba, PyYAML, python-easyconfig, JsonSir, pyrsistent, attrs, jsonschema, JsonForm, resource, soupsieve, beautifulsoup4, astropy, webencodings, html5lib, pywin32-ctypes, keyring, astroquery, winshell, more-itertools, pymovie
Successfully installed Adv2-1.2.0 JsonForm-0.0.2 JsonSir-0.0.2 PyQt5-5.15.0 PyQt5-sip-12.8.0 PyWavelets-1.1.1 PyYAML-5.3.1 astropy-4.0.1.post1 astroquery-0.4.1 attrs-19.3.0 beautifulsoup4-4.9.1 cycler-0.10.0 decorator-4.4.2 html5lib-1.1 imageio-2.9.0 jsonschema-3.2.0 keyring-21.3.0 kiwisolver-1.2.0 llvmlite-0.33.0 matplotlib-3.3.0 more-itertools-8.4.0 networkx-2.4 numba-0.50.1 numpy-1.19.1 opencv-python-4.3.0.36 pillow-7.2.0 pymovie-2.7.6 pyparsing-2.4.7 pypiwin32-223 p pyqtgraph-0.11.0 pyrsistent-0.16.0 python-dateutil-2.8.1 python-easyconfig-0.1.7 pywin32-ctypes-0.2.0 resource-0.2.1 scikit-image-0.17.2 scipy-1.5.2 soupsieve-2.0.1 tiffiffe-2020.7.24 webencodings-0.5.1 winshell-0.6
(base) c:\Anaconda3>
```

Note that Python will process lots of routines and generate a lot of messages in the Anaconda prompt window. This will take several minutes. Be patient. There may/will be a few strange looking messages. Error messages regarding 'Spyder' can be disregarded. When done, somewhere in the 'Successfully installed' section at the end, there should be a line with pymovie-X.X.X (latest version number will be shown), which tells us that the PyMovie install worked. At the time of creation of these instructions, PyMovie 2.9.2 was the latest version. This may change when PyMovie is installed on your computer.

Next, type **pip install pyote**. The same comments apply to this installation. You should see Successfully installed pyote-X.X.X (latest version number will be shown). At the time of creation of these instructions, PyOTE 3.7.3 was the latest version. This may change when PyOTE is installed.

Step 4: Run and Test PyMovie and PyOTE installations.

Use the already open 'Anaconda Prompt' and enter the following:

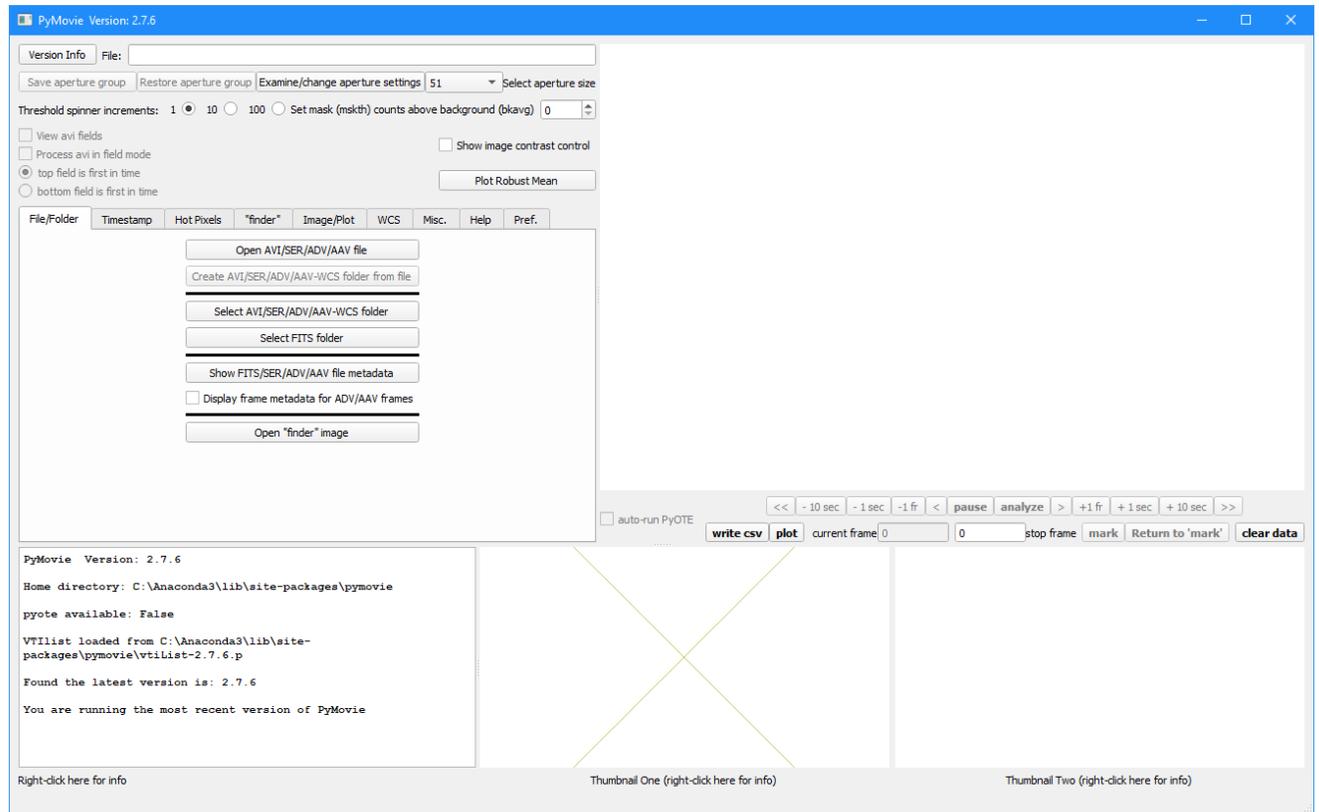
On the first line after the > prompt type: **python**

After you get the >>> prompt type: **from pymovie import main**

After you get the >>> prompt type: **from pyoteapp import pyote**

You will have to wait a while for these imports 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 the above imports have completed and returned you to the >>> prompt, type: **main.main()**
 PyMovie should start up in a few seconds looking something like the screen grab shown below:



The size and position of the PyMovie 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. There are three 'splitters' that can be used to reapportion the space used for the main GUI elements.

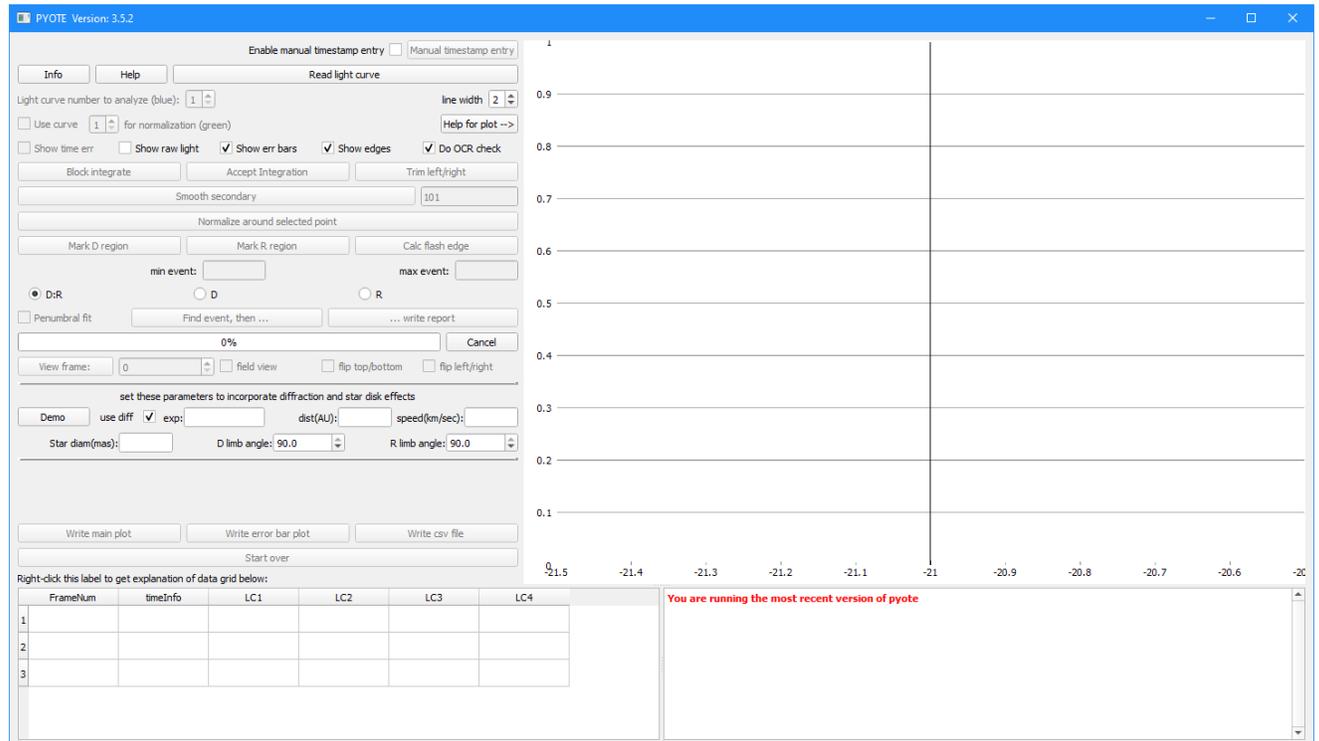
Note for future runs of PyMovie: If you are running the latest available version, the text in the PyMovie 'textOut' box at the bottom left of the screen will read:

```
PyMovie Version: 2.7.6
Home directory: C:\Anaconda3\lib\site-packages\pymovie
pyote available: False
VTIlist loaded from C:\Anaconda3\lib\site-packages\pymovie\vtiList-2.7.6.p
Found the latest version is: 2.7.6
You are running the most recent version of PyMovie
```

If you do not have the most recent version, prior to PyMovie 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 PyMovie textOut box at the bottom left of the screen and follow the instruction for restarting PyMovie.

Next close the instance of PyMovie opened above. You should get the >>> prompt in the Anaconda Prompt window. Now type: **pyote.main()**

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



Note: If you have the latest version, the text in the PYOTE 'log' box at the bottom of the screen will read:

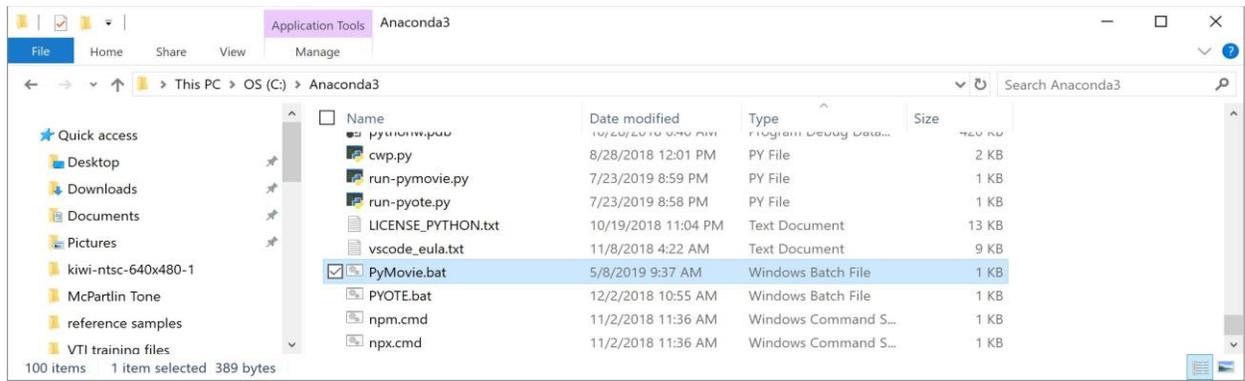
You are running the most recent version of pyote

If you do not 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.

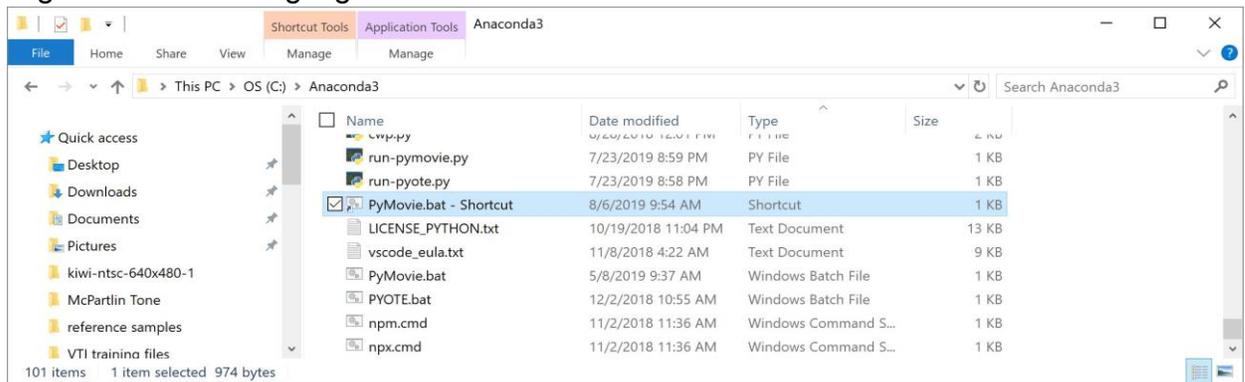
Step 5: Add desktop icon to simplify starting up PyMovie and PyOTE

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

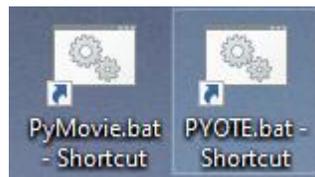
Locate the file **PyMovie.bat** and **PYOTE.bat** (you may not see the .bat extension if you have not enabled the display of file extensions). Its type is **Windows Batch File** as shown below (if this file is not present, you have not yet run PyMovie or PyOTE. PyMovie and PyOTE create this file when they run -- but only if not already present):



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



Drag the resulting “PyMovie.bat – Shortcut” file (highlighted above) to your desktop. Do the same for the PYOTE.bat file (not highlighted). Below is a clip of what the icons looks like:



Double-clicking the icon will now start up PyMovie or PyOTE.

It is possible to change the icon picture itself by right-clicking on the shortcut icon, selecting 'properties', and in the Shortcut tab, clicking on Change icon tab and then associating a new icon with the shortcut. Just browse to the Python.exe program and select that as the icon. Here is an example of a modified Python icons:



Congratulations, you have now installed PyMovie and PyOTE.

User instructions are provided in text boxes that appear when a right-click on a button (or sometimes a label) is performed. This form of help is provided in both PyMovie and PyOTE.

All new users are strongly encouraged to right-click on each of the buttons and menu items to read the instructions before attempting to run PyMovie or PyOTE.

Additional documentation is provided in PyMovie and PyOTE.

For PyMovie, click on the Help tab and then click on any of the help topics. The Documentation item provides a 27-page tutorial on how to use PyMovie.

Clicking on the 'Version Info' button in PyMovie or the 'Info' button in PyOTE will open a pdf file that describes the version to version changes and should always be consulted just after a new version is installed.

All new users are strongly encouraged to read the Documentation before attempting to run PyMovie or PyOTE.