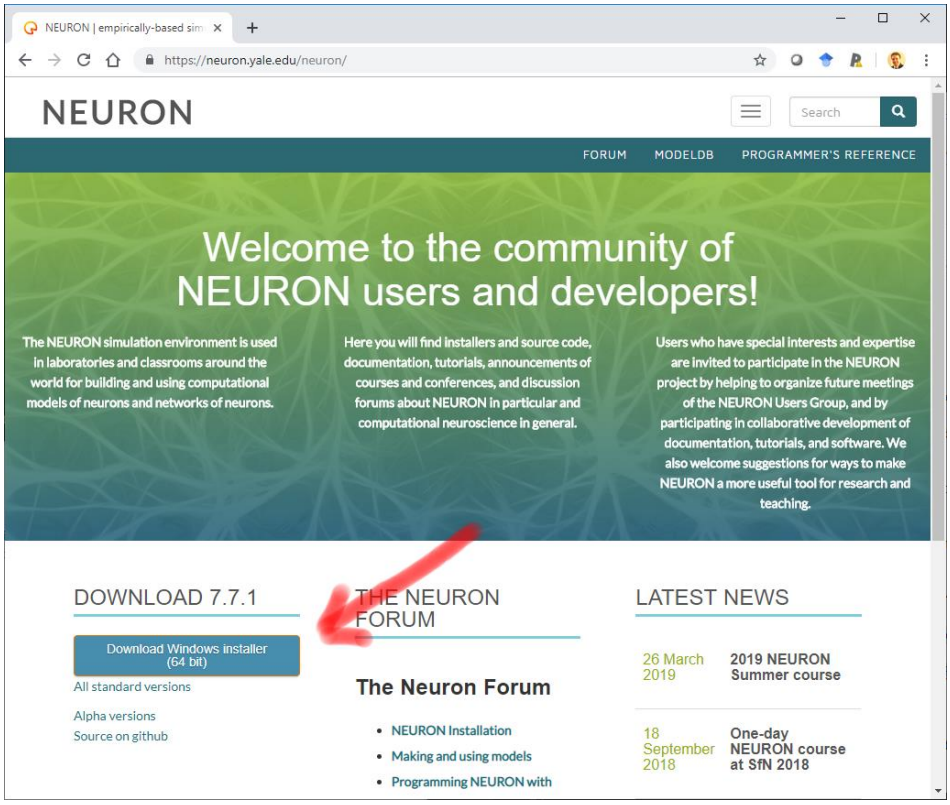
NEURON 7.7.1 quick start

Note: Linux users who prefer to compile NEURON themselves can find copy-pasteable instructions for Ubuntu and CentOS at neuron.yale.edu/neuron/download/compile_linux

For everyone else:

Step 1: Go to http://neuron.yale.edu, click the download button (see arrow, below), install accepting all defaults.

> The download button on the homepage autodetects your current operating system. For Linux, you have a choice of .deb and .rpm.



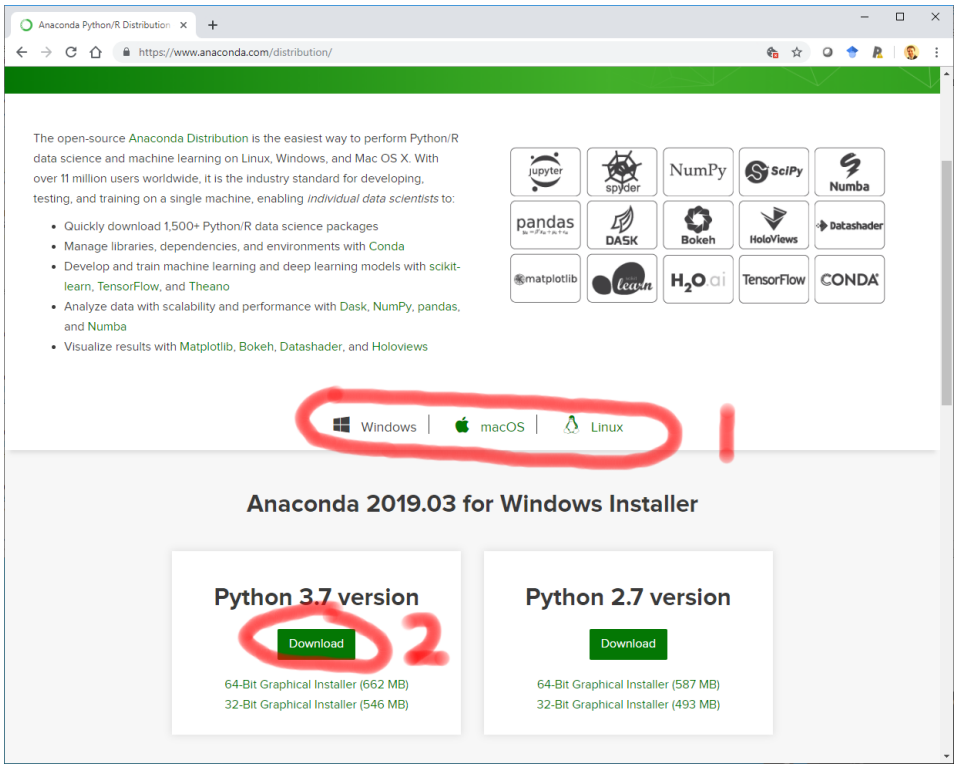
Step 1b (Macs only): Install XQuartz (http://xquartz.org) to enable NEURON's graphics.

Step 1c (Macs and minimal Linux installs only): Install command line developer tools. On a mac, open a terminal (find the app with spotlight), and type `xcode-select --install` Select install in the dialog that pops up. On Linux, make sure `gcc` is installed (it almost certainly is already installed).

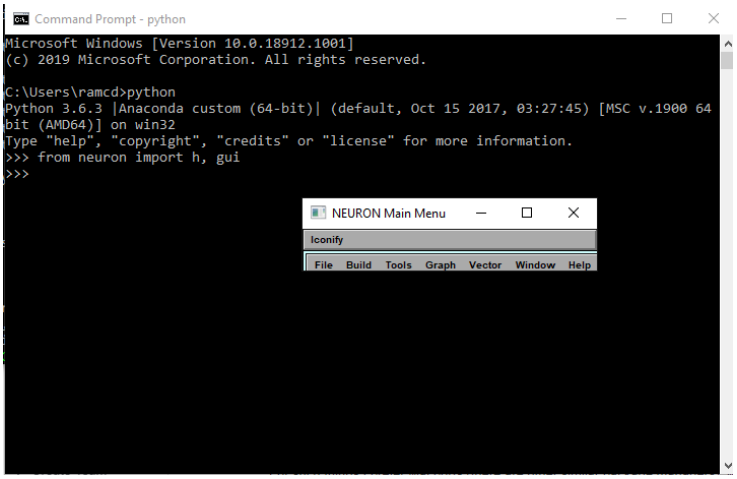
> *If you get the following error on the mac, you can skip this step .* `xcode-select: error: command line tools are already installed, use "Software Update" to install updates`

Step 2: Install Python. We suggest Anaconda's Python 3.7, but there are many good choices. For Anaconda, go to https://www.anaconda.com/distribution/ then (1) select your operating system and then (2) select download. Finally, install. We suggest accepting all the defaults.

Macs and Linux come with a version of Python, so if you prefer, you can just use that.



Step 3: Test. Open a terminal (on macOS, find "terminal" with spotlight; on PC use cmd or powershell). Launch "`python`" or in Linux "`python3`". Type "`from neuron import h, gui`" A new window should popup. In this window, select File – Quit to exit.



If this doesn't work, it's probably a PATH or PYTHONPATH issue.

Step 4: Install MPI to enable parallel simulations.

On Windows: Install Microsoft MPI:
https://www.microsoft.com/en-us/download/details.aspx?id=57467

On Mac:

If you installed Anaconda, it suffices to run the following from the terminal:

```
conda install mpi4py
```

Otherwise, you'll have to get it from e.g. homebrew or compile it yourself; see

https://wiki.helsinki.fi/display/HUGG/Open+MPI+install+on+Mac+OS+X

On Ubuntu Linux:

```
sudo apt install libopenmpi-dev
```

On CentOS Linux:

```
sudo yum -y install openmpi openmpi-devel
```

Try running `mpicc`. If this doesn't work, you'll need to update your `PATH` (probably set in `~/.bashrc`) to include the mpi library by adding this line to the end of `.bashrc`:

```
export PATH=$PATH:/usr/lib64/openmpi/bin
```