How to install RMS under Windows

This document was written by Peter Eschman, and is based on a recorded TeamViewer session on his computer, under the direction of Denis Vida.

Start by downloading these three resources:

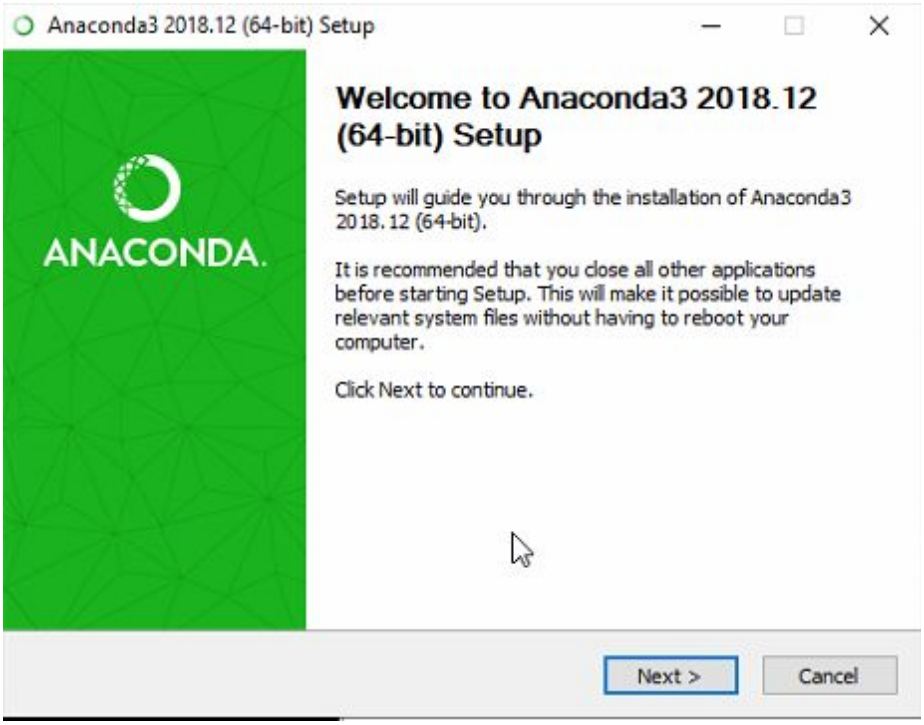
1) http://go.microsoft.com/fwlink/?Linkid=691126
 download Visual C++ 2015 x86 x64 Cross Build Tools
 Install the tools

2) https://www.anaconda.com/download
 download the install for Python 3.7

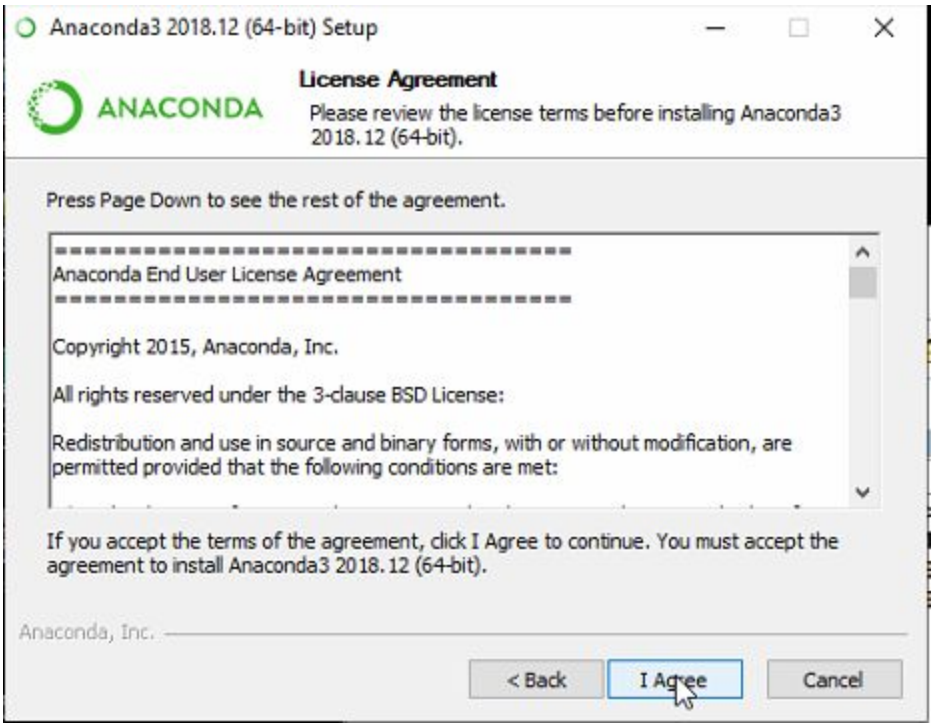
3) https://git-scm.com
 download Git

Continuing step 2), installing Anaconda:

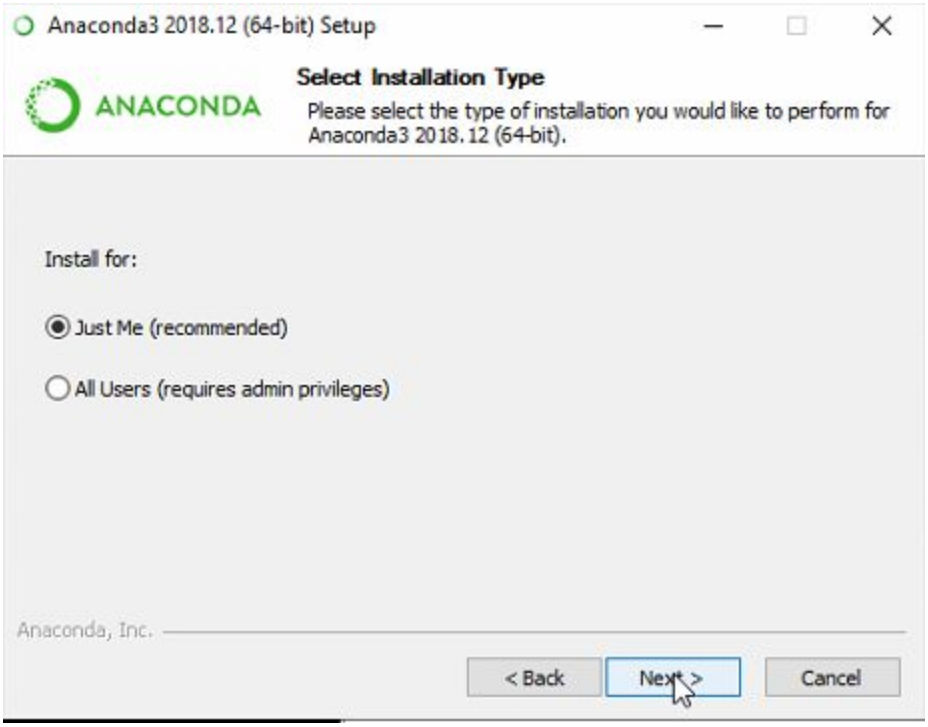
First you will see the Welcome screen, so click Next:



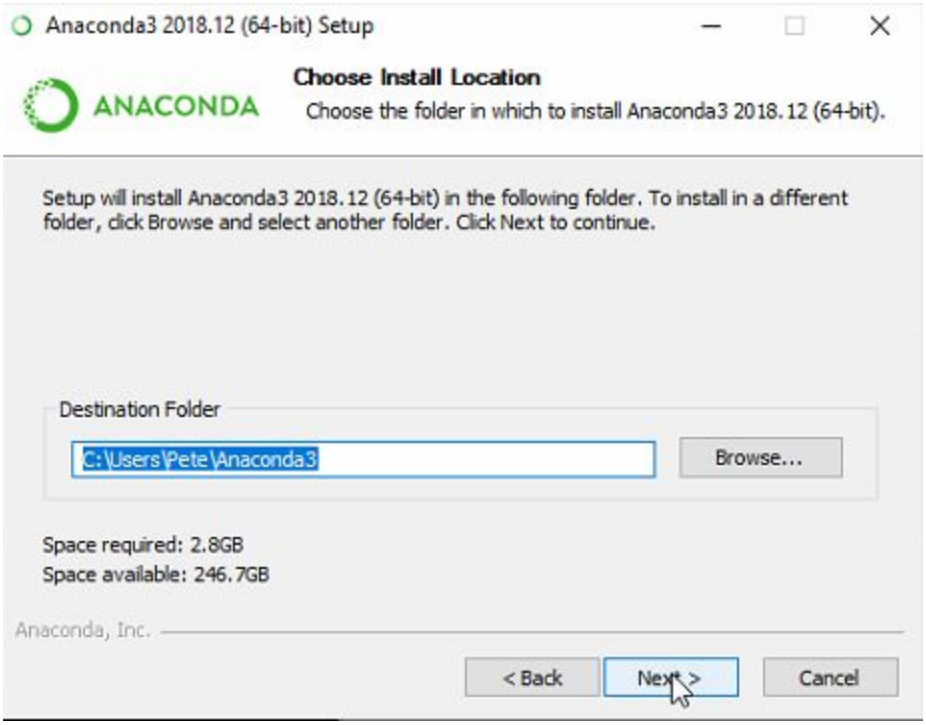
Click I Agree to accept license:



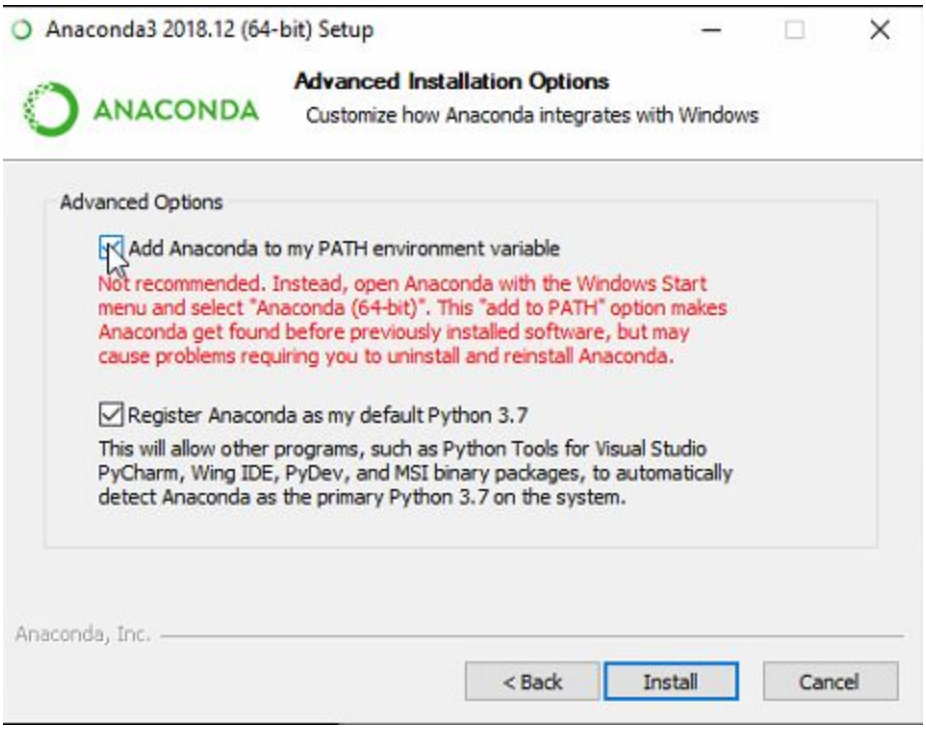
You need to install for "just me" on the next setup screen, otherwise the install will not work correctly:



Choose destination folder next, the default location is fine:

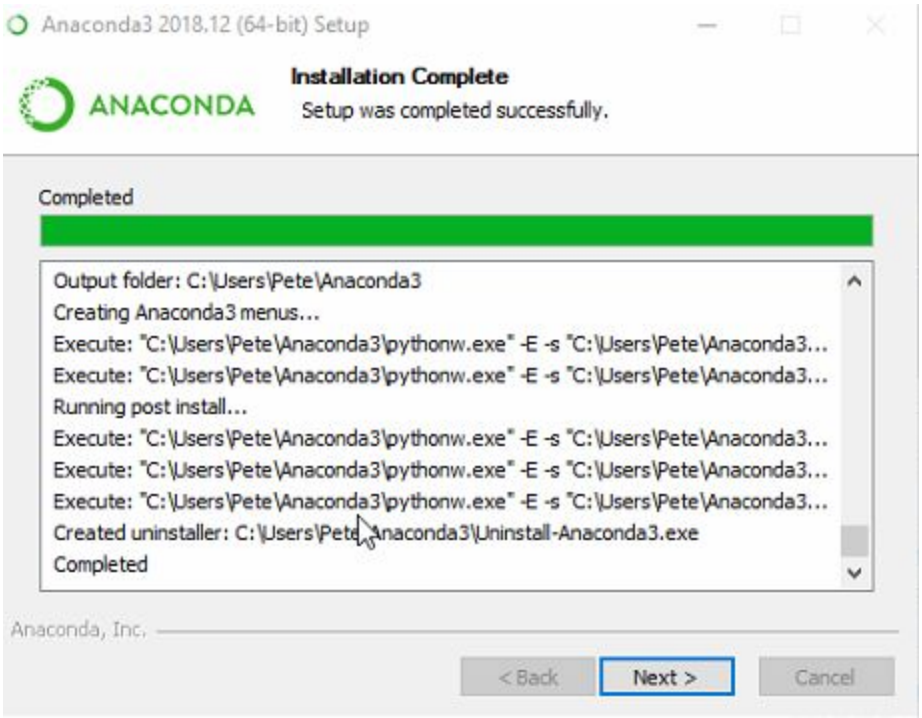


On the next screen, it is best to select the option to add Anaconda to the PATH environment variable,, then click Install. If you don't do this, you will not be able to call conda from Windows PowerShell, so do this unless you are using another active installation of Python:

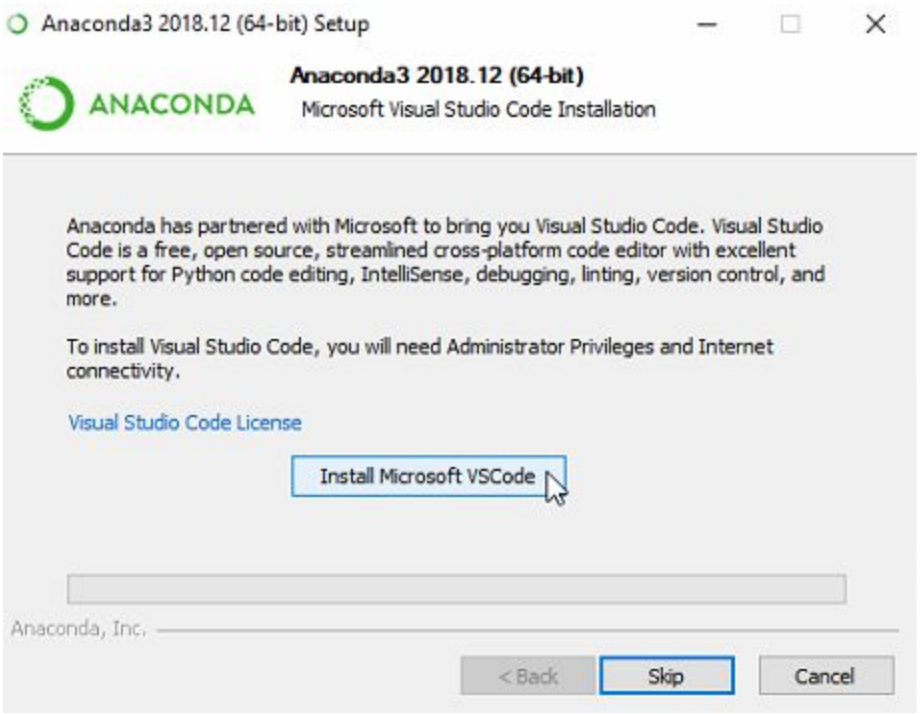


After you have clicked Install, it may take a while for the install to complete. On an older Asus N61J machine this took about 52 minutes to complete. On a newer Dell laptop, this took about 21 minutes.

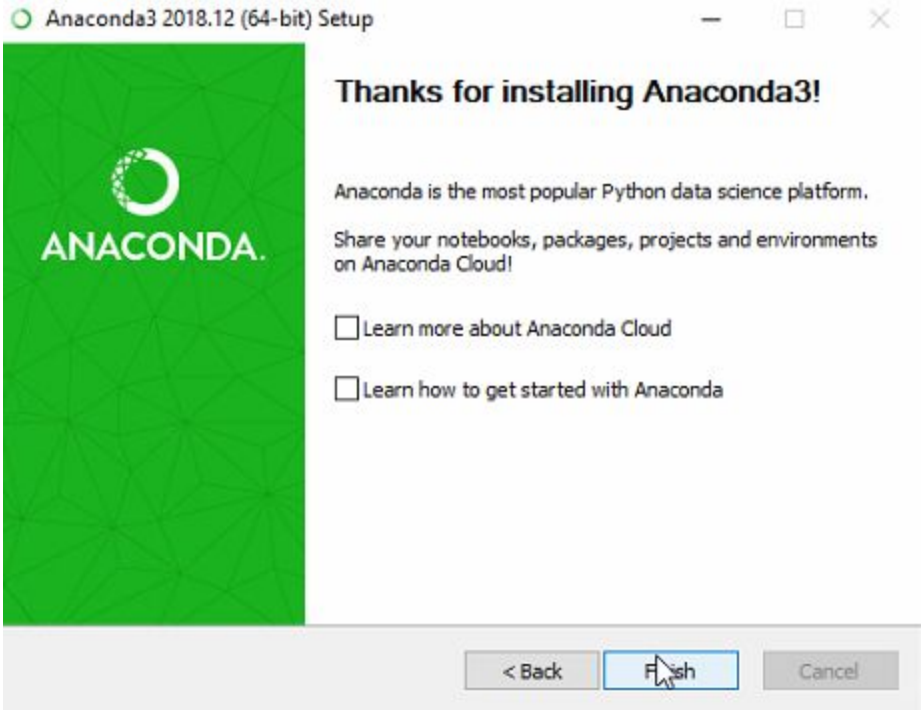
When the window says "Completed", click Next



Now click the button that says Install Microsoft VSCode:



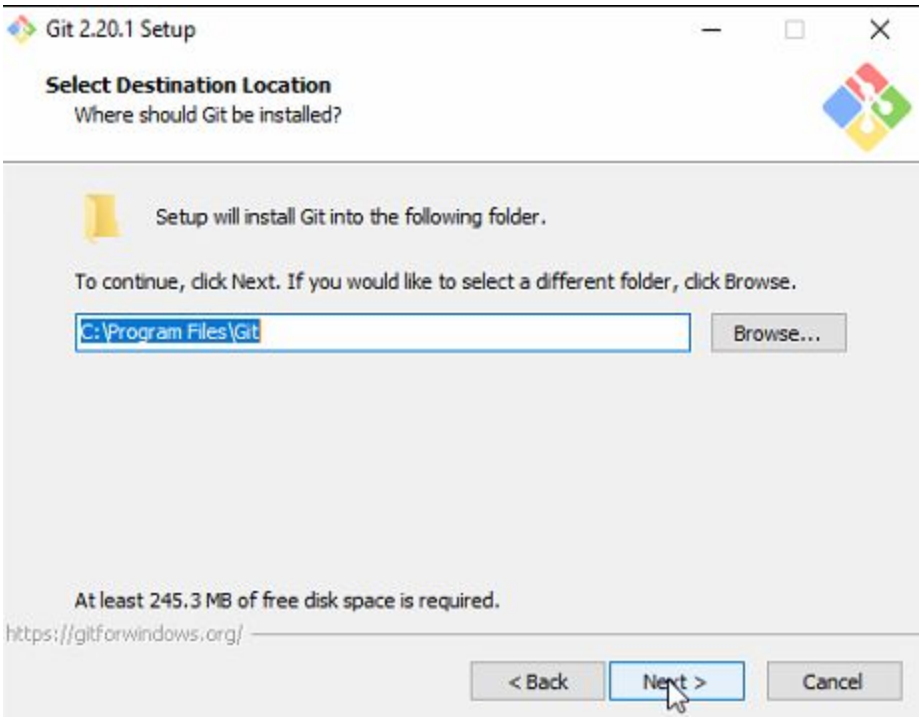
At the end of the process, it will say "Thanks for installing Anaconda" You can elect to "Learn more about Anaconda Cloud" and "Learn how to get started with Anaconda", or skip these steps, since we are primarily interested in getting RMS running, so uncheck these options and click "Finish":



Continuing step 3) Install Git

Click "Next" on GNU license:

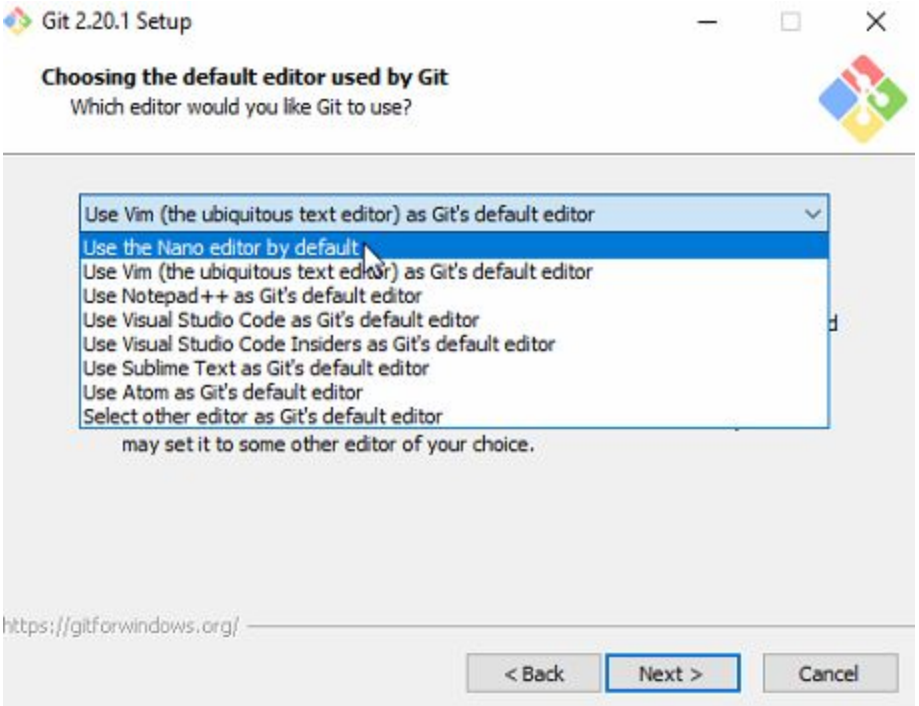
Now you can accept the default install folder:



On the next screen, you can leave the default install components alone, then click "Next".

On the next screen you can leave the Start Menu Folder on default, then click "Next".

The next step is to "Choosing the default editor used by Git". At this point you can select the option to change the editor from Vim to Nano, since this is the typical editor for the Raspberry Pi. Make your selection, then click "Next":



On the next screen: "Adjusting your PATH environment", leave settings on default and click "Next".

On the next screen: "Choosing HTTPS transport backend", leave settings on default and click "Next".

On the next screen: "Configuring the line ending conventions", leave settings on default and click "Next".

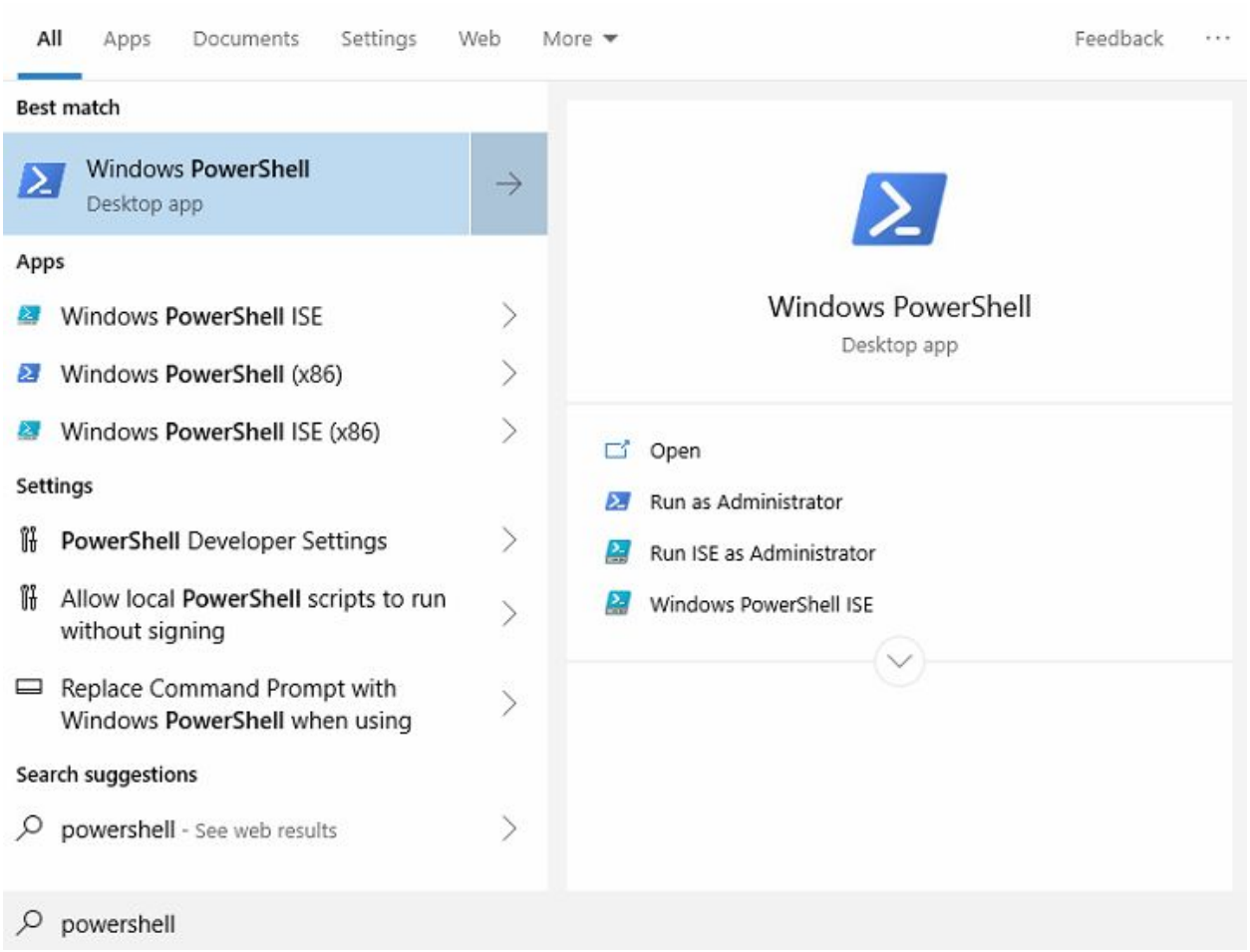
On the next screen: "Configuring the terminal emulator to use with Git Bash", leave settings on default and click "Next".

On the next screen: "Configuring extra options", leave settings on default and click "Install".

Next you will see "Completing the Git Setup Wizard", and you can elect to "View Release Notes", or just click "Finish" at this point:

Final steps, and running RMS under Windows:

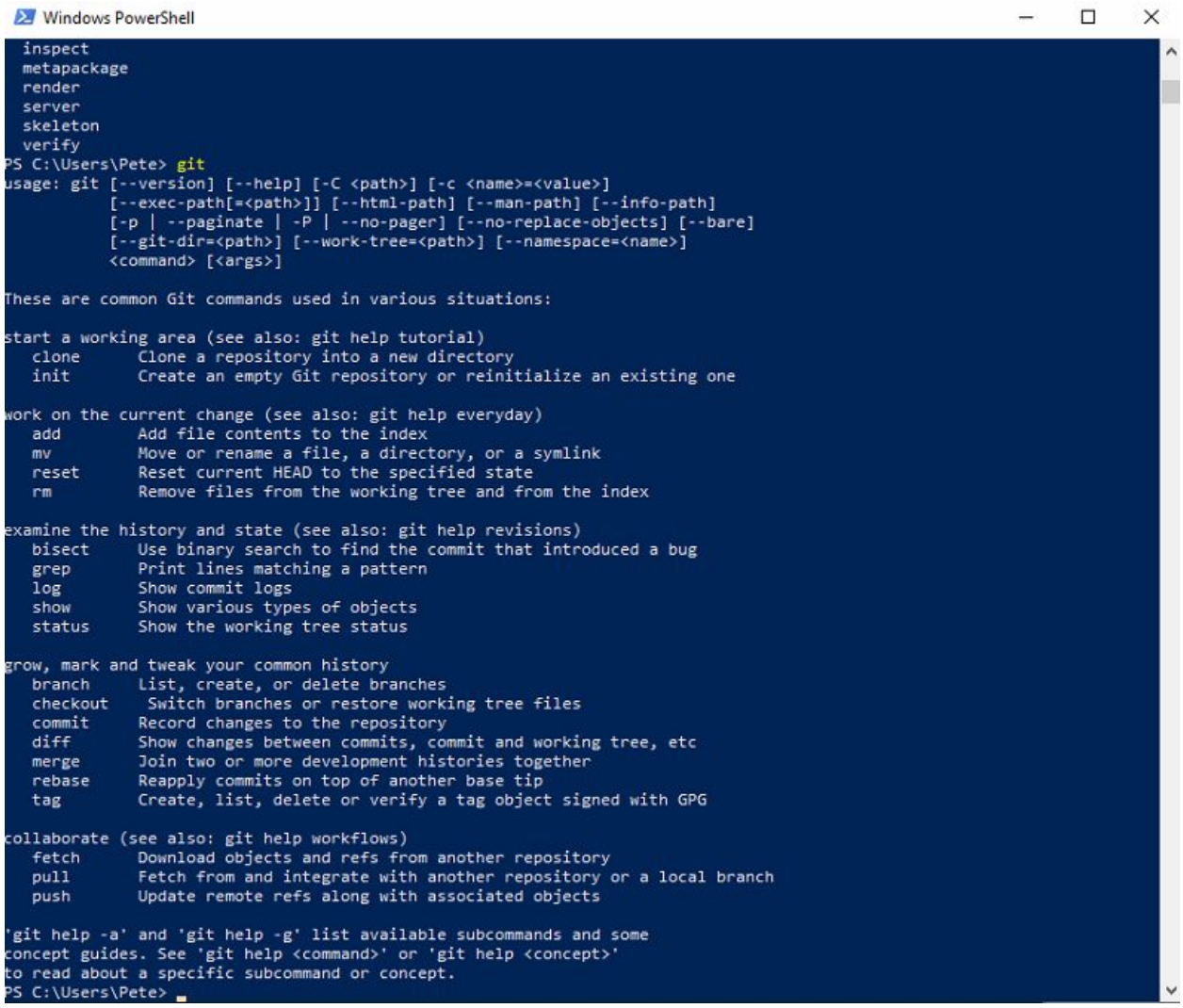
After you have completed the Git install, start up Windows PowerShell (you can do this by opening the start menu, and typing "Power", then select Windows PowerShell, and open using the default settings:



The next steps are tests to see if both conda and git work from PowerShell.

type "conda" and wait to see the help options

type "git" and wait to see the help options



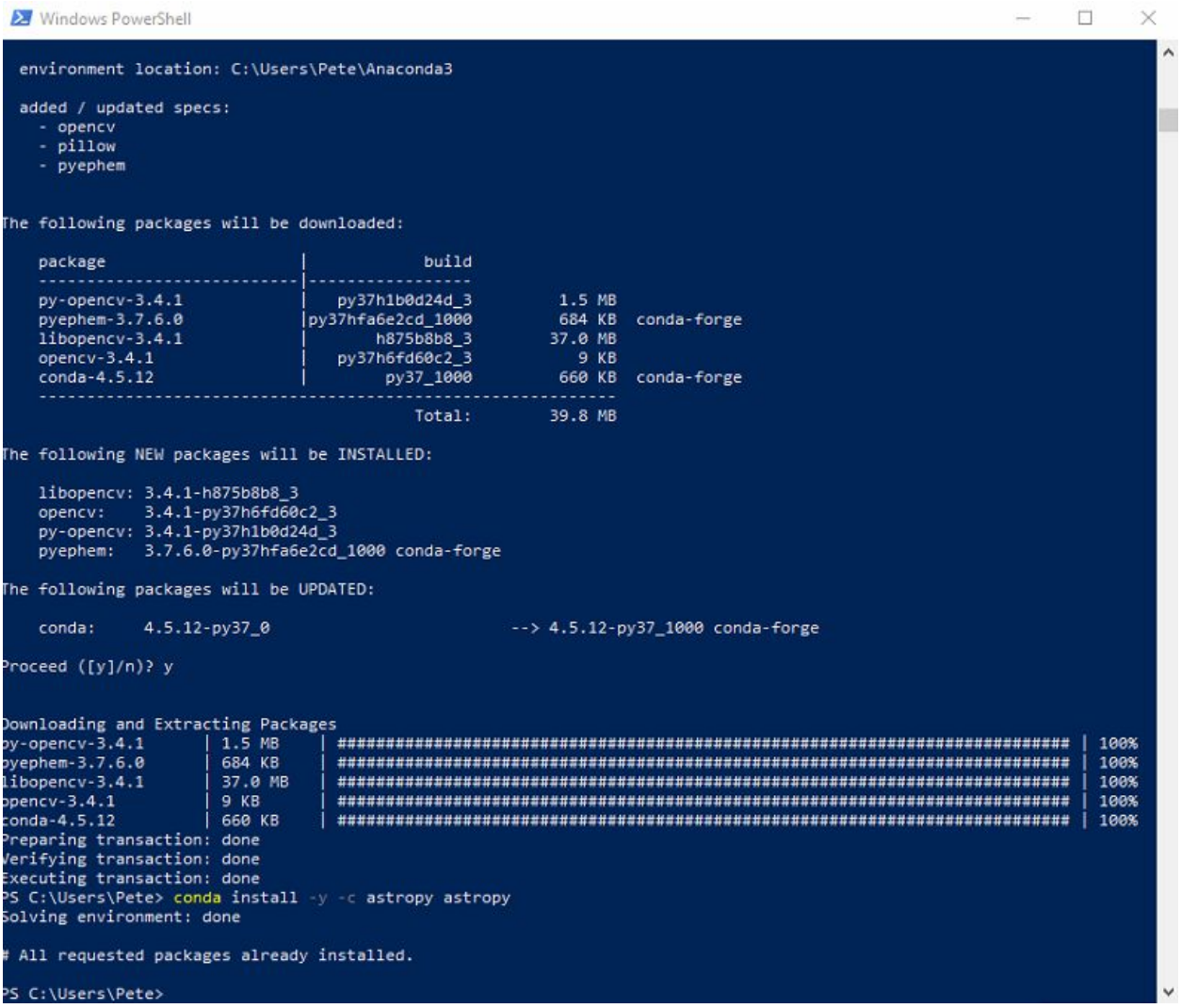
Next copy and paste the following three commands into PowerShell. Hit return after pasting each command (if you are prompted: "Proceed ([y]/n)? type y)

conda install -y numpy scipy gitpython cython matplotlib

conda install -y -c conda-forge pyephem opencv Pillow

conda install -y -c astropy astropy

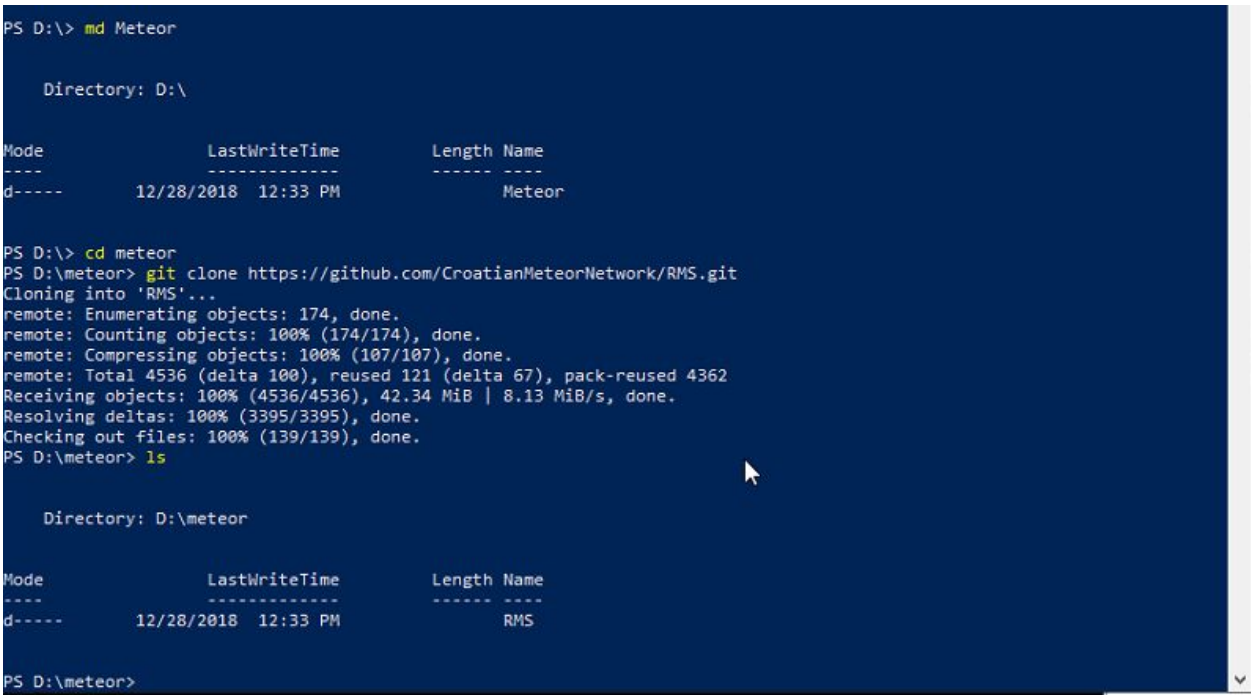
After these completing steps, Git has installed the basic required libraries.



Next, make new directory for source code, or leave on c:\users\xxx\
(I chose making a directory called d:\meteor).

Now change into the source code directory of your choice, and Clone the RMS library by copying and pasting the following command into PowerShell :

git clone https://github.com/CroatianMeteorNetwork/RMS.git



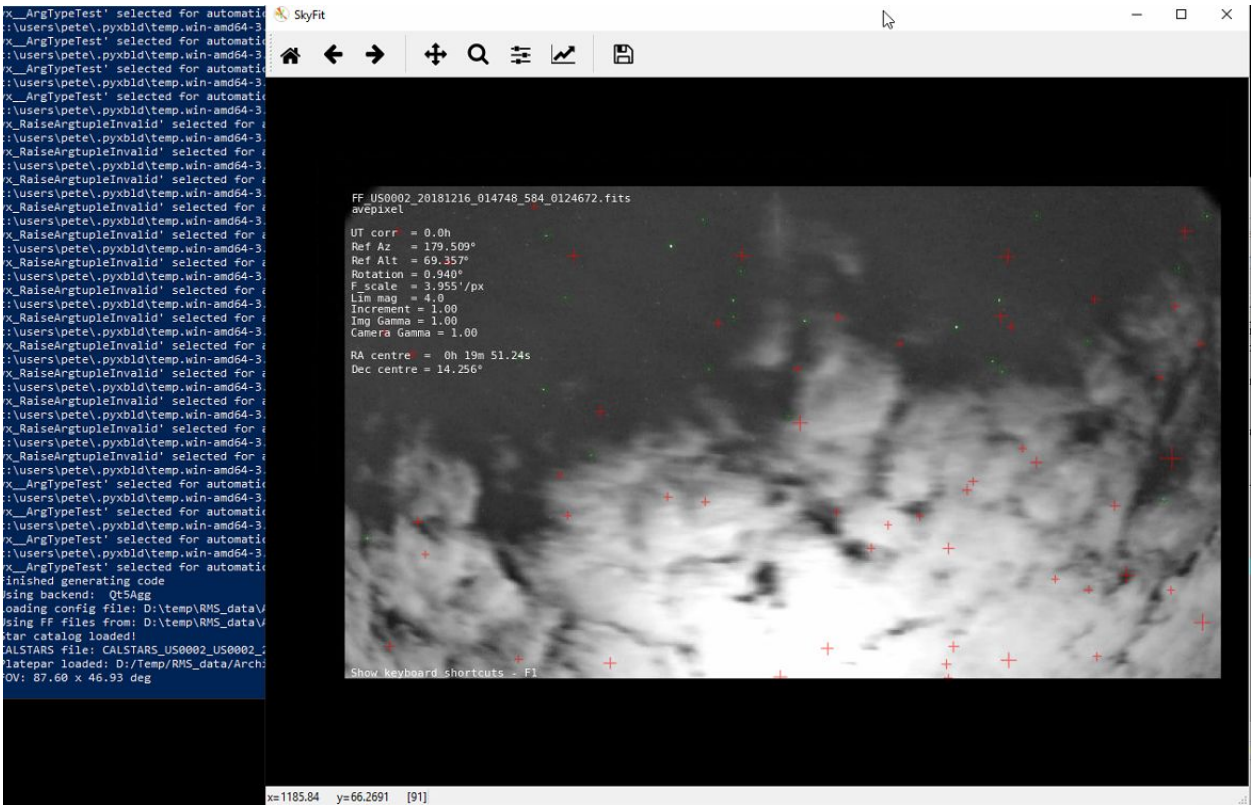
Once this process is done, change into the new RMS directory just created in the previous step.

If you type: python , the prompt will change to >>>
To leave the python environment, type: exit()

Please note that the first time you run a python RMS command, the environment will need build for the first time. Now you can execute some typical commands, like these, assuming your data directory is something like this:

\temp\RMS_data\ArchivedFiles\US0002_20181216_002400_040473

You can test with commands link this one (this is all on one line, not folded):
python -m RMS.Astrometry.SkyFit
D:\temp\RMS_data\ArchivedFiles\US0002_20181216_002400_040473 --config .



When you are done, you can close PowerShell by typing exit

To open and use later, Start PowerShell, change into your new source directory:
cd meteor\rms
and run some typical commands, like stacking:

python -m Utils.StackFFs -s
\temp\MCam\RMS_data\ArchivedFiles\US0002_20181206_002203_521407 png

Or

python -m Utils.StackFFs -s d:\temp\RMS_data\BobH_07\1214_07 png

Please note that RMS commands may require that your data is located under a directory named "RMS_data".

I hope you will enjoy your new and powerful RMS command environment, I know I will.
