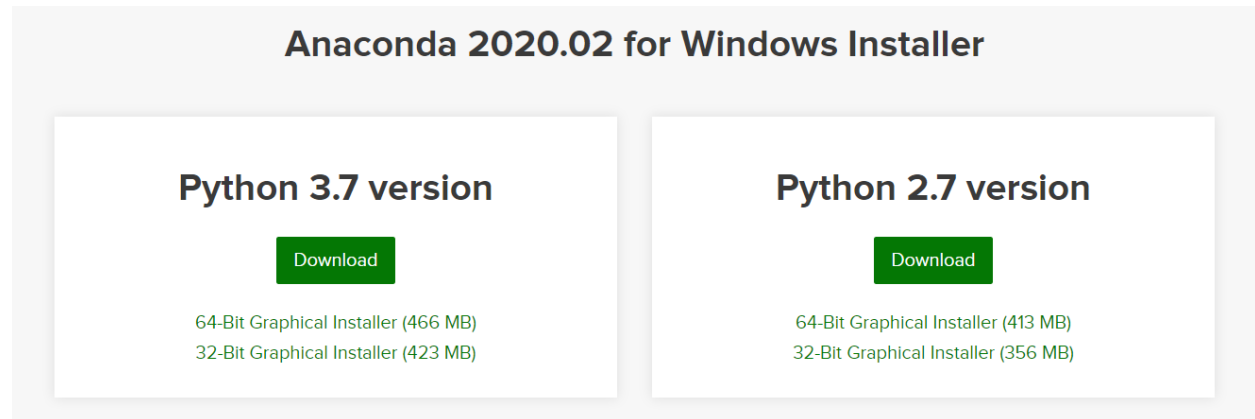


# Plength Installation Guide

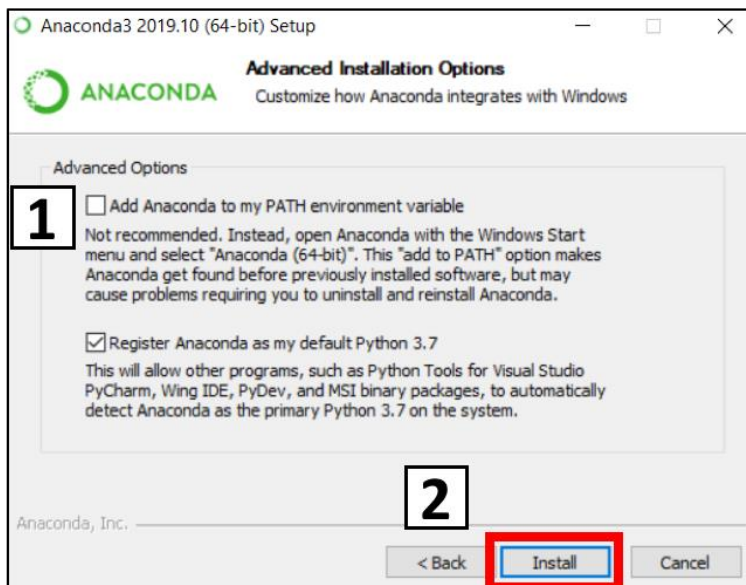
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For any problems, please contact [sai.chananchida@gmail.com](mailto:sai.chananchida@gmail.com)

## 1. Install Python through [Anaconda](#)

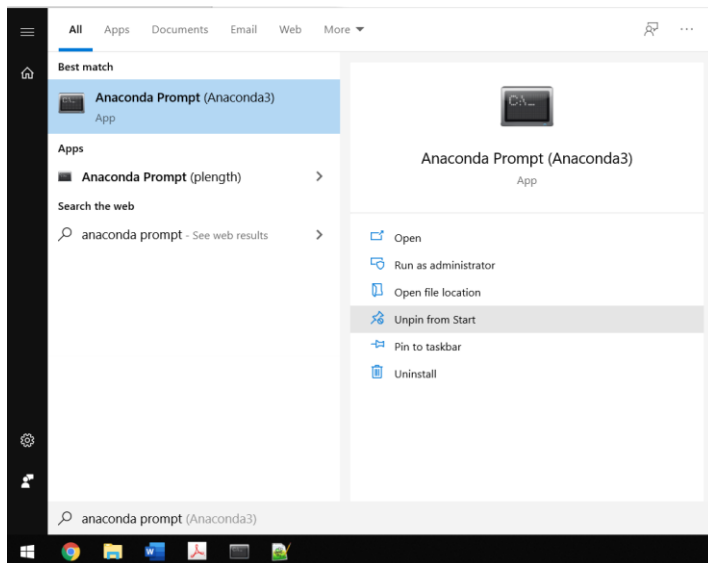


Download the Python 3.7 version. If you click the “Download” button it should automatically detect whether your computer is 32- or 64-Bit. It is recommended that you use Anaconda as your default Python and NOT add Anaconda to your PATH environment variable (see below).



## 2. Install git and clone the repository

- Open “Anaconda prompt” (Using the “Command prompt” will not work!)



- Install git

```
conda install -c anaconda git
```

- When asked if you want to proceed, type “y” and press enter. Then type:

```
git clone https://github.com/csangara/plength.git
```

This will install the plength repository locally on your desktop.

```
Anaconda Prompt (anaconda3)
(base) C:\Users\Tua>conda install -c anaconda git
Collecting package metadata (current_repodata.json): done
Solving environment: done

Anaconda Prompt (anaconda3)

conda                                pkgs/main::conda-4.8.2-py37_0 --> anaconda::conda-4.8.3-py37_0

The following packages will be SUPERSEDED by a higher-priority channel:

ca-certificates                     pkgs/main --> anaconda
certifi                             pkgs/main --> anaconda
openssl                             pkgs/main --> anaconda

Proceed ([y]/n)? y

Downloading and Extracting Packages
ca-certificates-2020.11.28 | 165 KB | ##### | 100%
git-2.23.0                  | 18.1 MB | ##### | 100%
certifi-2019.11.28         | 157 KB | ##### | 100%
openssl-1.1.1d             | 5.7 MB | ##### | 100%
conda-4.8.3                 | 3.0 MB | ##### | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done

(base) C:\Users\Tua>

(base) C:\Users\Tua>git clone https://github.com/csangara/plength.git
Cloning into 'plength'...
remote: Enumerating objects: 75, done.
remote: Counting objects: 100% (75/75), done.
remote: Compressing objects: 100% (62/62), done.
remote: Total 75 (delta 21), reused 53 (delta 10), pack-reused 0
Unpacking objects: 100% (75/75), done.

(base) C:\Users\Tua>
```

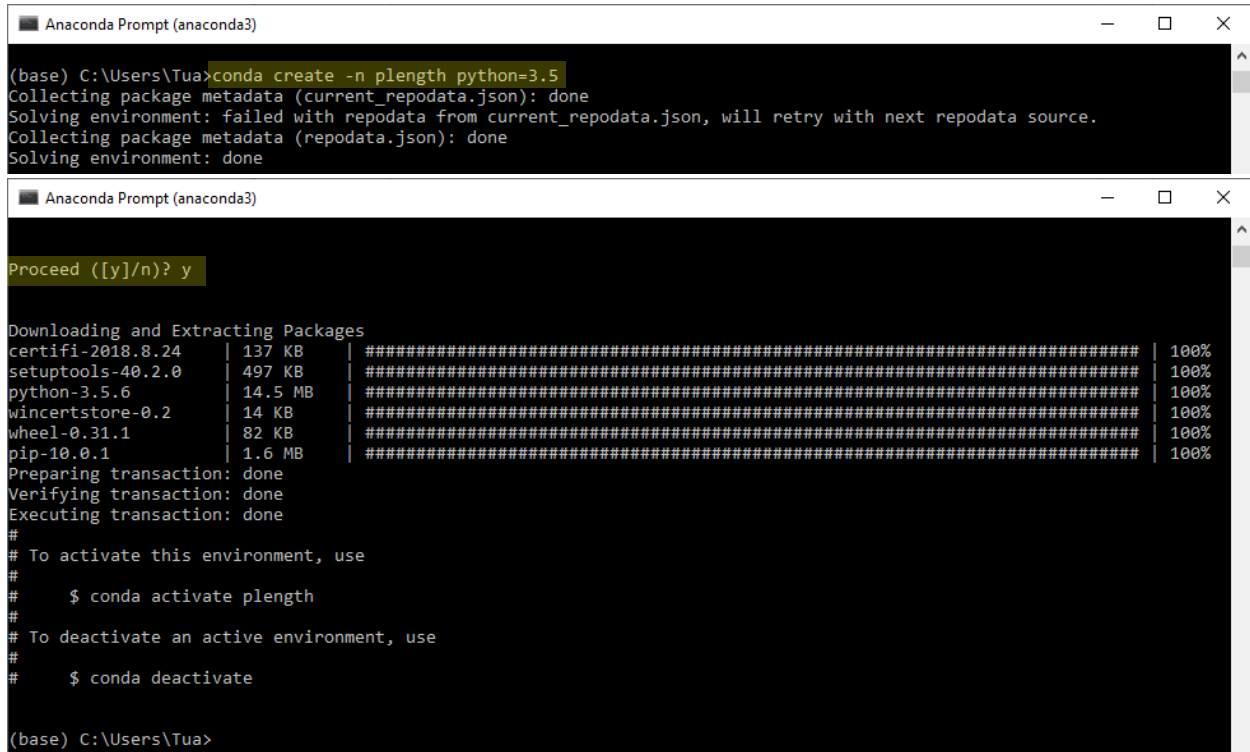
### 3. Create a virtual environment

- Create a virtual environment using the following command

```
conda create -n plength python=3.5
```

You will be asked if you want to install the following packages. Type “y” and press enter.

After a few moments, your virtual environment will be created, which will allow you to use specific versions of the libraries that were used to write Plength.



```
Anaconda Prompt (anaconda3)
(base) C:\Users\Tua>conda create -n plength python=3.5
Collecting package metadata (current_repodata.json): done
Solving environment: failed with repodata from current_repodata.json, will retry with next repodata source.
Collecting package metadata (repodata.json): done
Solving environment: done

Proceed ([y]/n)? y

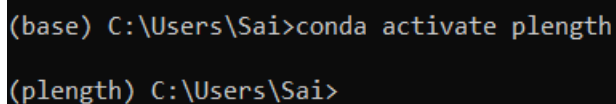
Downloading and Extracting Packages
certifi-2018.8.24 | 137 KB | ##### | 100%
setuptools-40.2.0 | 497 KB | ##### | 100%
python-3.5.6 | 14.5 MB | ##### | 100%
winertstore-0.2 | 14 KB | ##### | 100%
wheel-0.31.1 | 82 KB | ##### | 100%
pip-10.0.1 | 1.6 MB | ##### | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
# $ conda activate plength
#
# To deactivate an active environment, use
#
# $ conda deactivate
#
(base) C:\Users\Tua>
```

### 4. Activate the virtual environment

- In the Anaconda prompt, type the following command:

```
conda activate plength
```

It is very important to do this every time before running the Plength script. You will be able to tell that you are in a virtual environment based on the start of the line, which changes from (base) to (plength)



```
(base) C:\Users\Sai>conda activate plength
(plength) C:\Users\Sai>
```

## 5. Install the required libraries

First you will have to enter the plength folder with the `cd` command, then install a specific package with `conda`, then install the rest of the packages with `pip`.

- `cd plength`
- `conda install llvmlite=0.23.1` (again, type 'y' when prompted)
- `pip install .`

(Note that the "." is very important!)

```
Anaconda Prompt (anaconda3) - conda deactivate - conda deactivate - conda install llvmlite - conda install llvmlite=0.23.1 - conda deactivate - cond...  
(base) C:\Users\Tua>conda activate plength  
(plength) C:\Users\Tua>cd plength  
(plength) C:\Users\Tua\plength>conda install llvmlite=0.23.1  
Collecting package metadata (current_repodata.json): done  
Solving environment: failed with initial frozen solve. Retrying with flexible solve.  
Collecting package metadata (repodata.json): done  
Solving environment: done  
  
## Package Plan ##  
  
environment location: C:\Users\Tua\anaconda3\envs\plength  
  
added / updated specs:  
- llvmlite=0.23.1  
  
The following NEW packages will be INSTALLED:  
  
llvmlite           pkgs/main/win-64::llvmlite-0.23.1-py35hcacf6c6_0  
  
Proceed ([y]/n)? y  
Preparing transaction: done  
Verifying transaction: done  
Executing transaction: done
```

```
Anaconda Prompt (anaconda3) - conda deactivate - conda deactivate - conda install llvmlite - conda install llvmlite=0.23.1 - conda deactivate - cond...  
(plength) C:\Users\Tua\plength>pip install .  
Processing c:\users\tua\plength  
Collecting numpy==1.14.1 (from Plength==1.1)  
Using cached https://files.pythonhosted.org/packages/28/bd/f0ae2f29021976c94a56990264b9ce38c2a021da0449fba8aade8f6209f2/numpy-1.14.1-cp35-none-win_amd64.whl  
Collecting scipy==1.0.0 (from Plength==1.1)  
Using cached https://files.pythonhosted.org/packages/51/92/974014afc3ff4f1f7bae4fd380d0b911a5e9187e711412a05c45549986ba/scipy-1.0.0-cp35-none-win_amd64.whl  
Collecting scikit-image==0.13.1 (from Plength==1.1)  
Using cached https://files.pythonhosted.org/packages/4e/dc/0166f777bf114642e1191d637c7f840a0d614e3fc8074e9514f1429c3ce7/scikit_image-0.13.1-cp35-cp35m-win_amd64.whl
```

After all packages have been installed you should be able to run Plength with the command

```
python plength.py
```

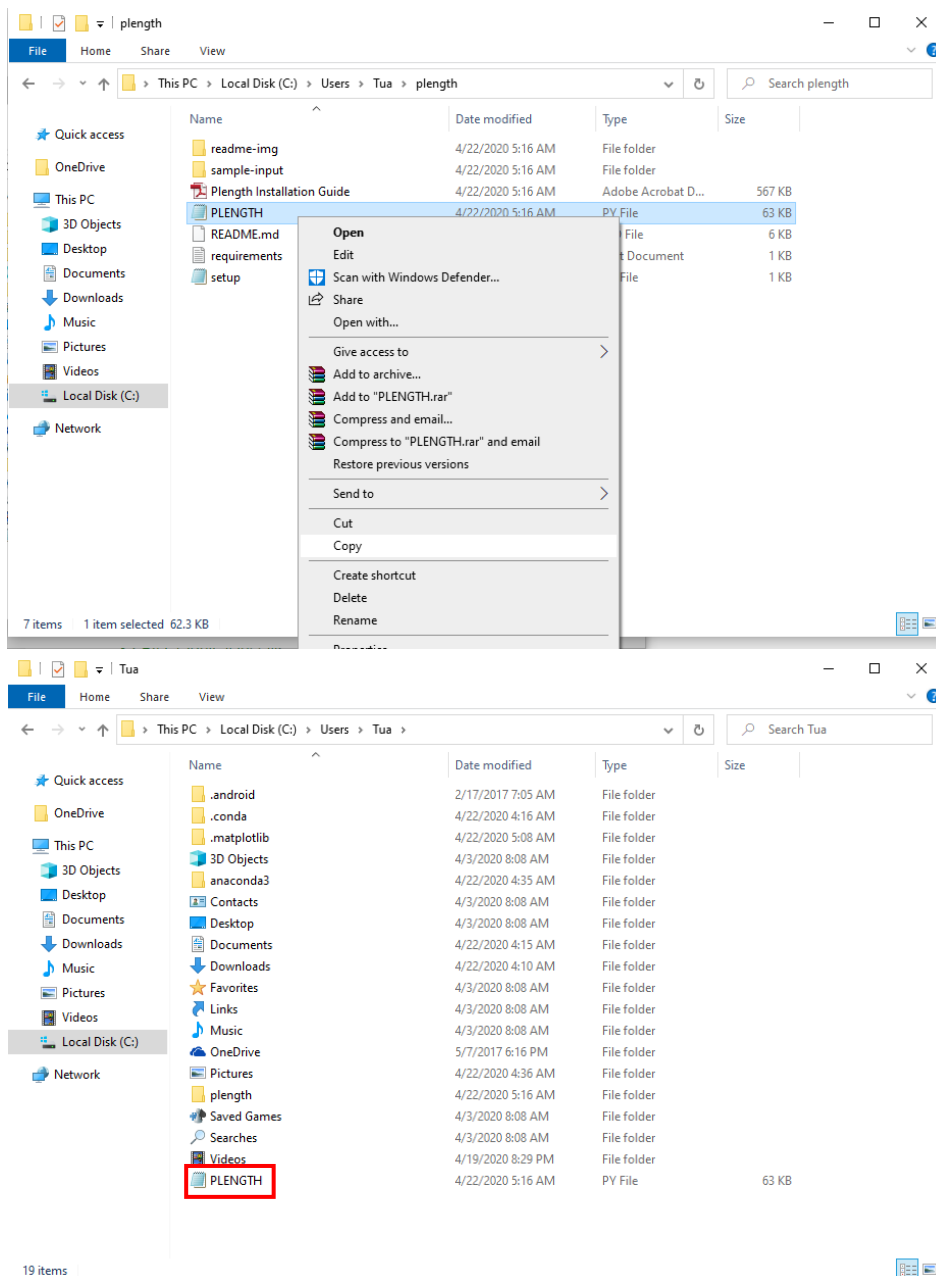
(PLENGTH does not have to be capitalized in Windows computers.)

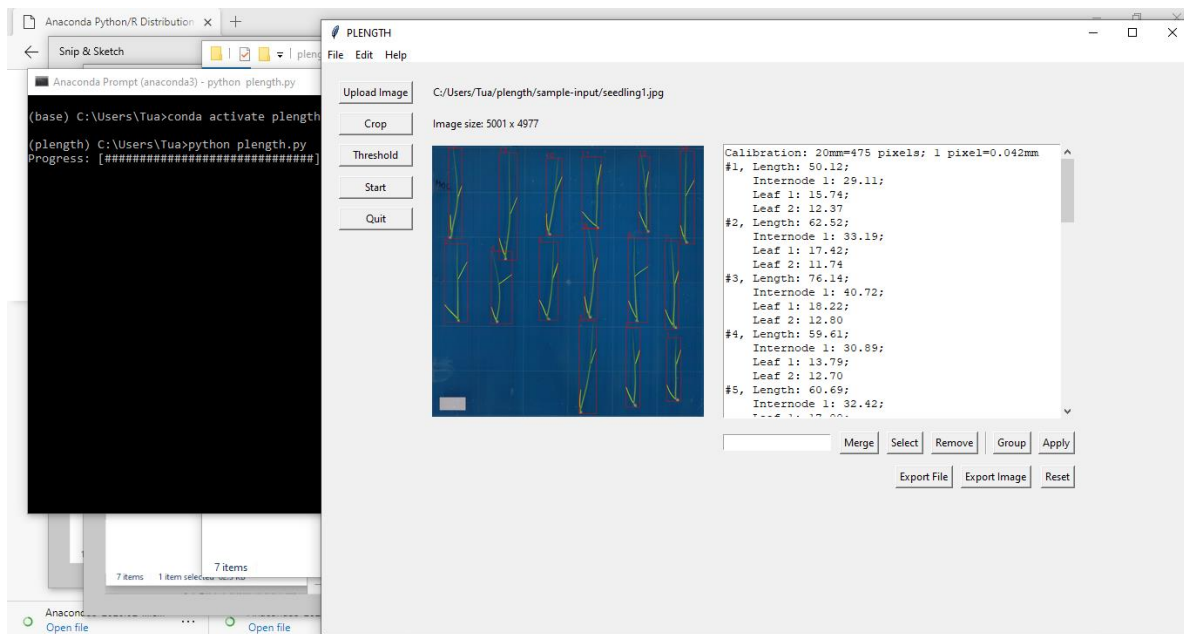
## 5. Using Plengh afterwards

From now on, every time you would like to use Plengh, you must

- Open “Anaconda Prompt”
- Type `conda activate plengh`
- Type `cd plengh`
- Type `python plengh.py`

Alternatively, if you move the PLENGTH.py file to your home directory, you can skip the `cd plengh` step.





Happy measuring!