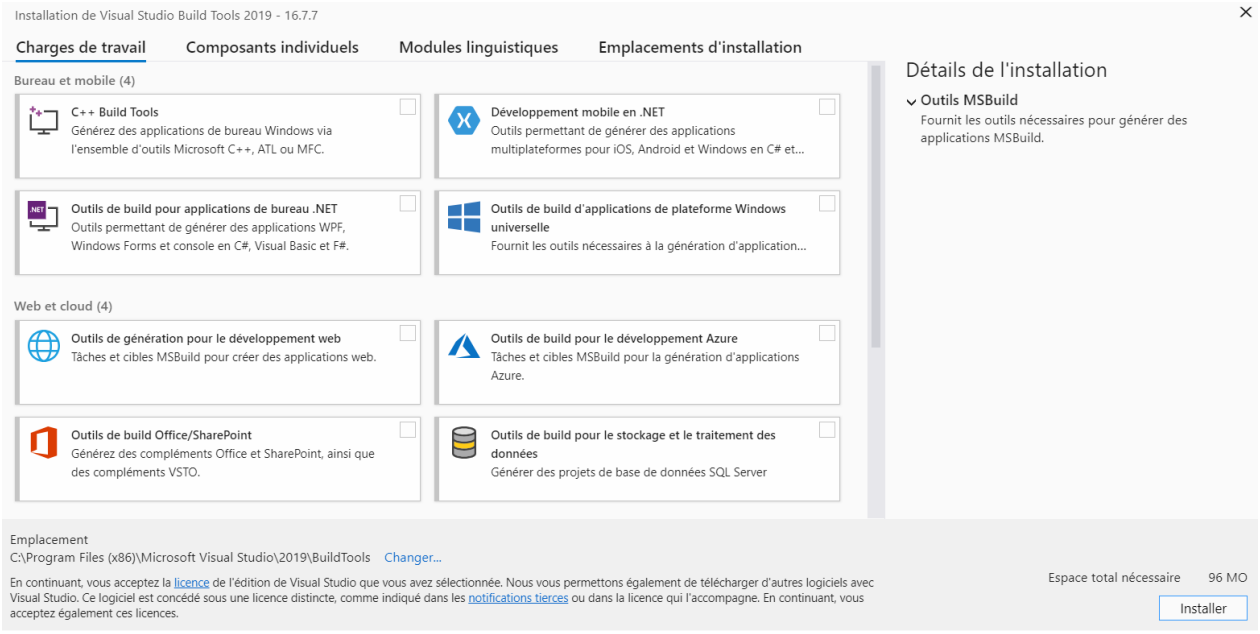
Tutorial:

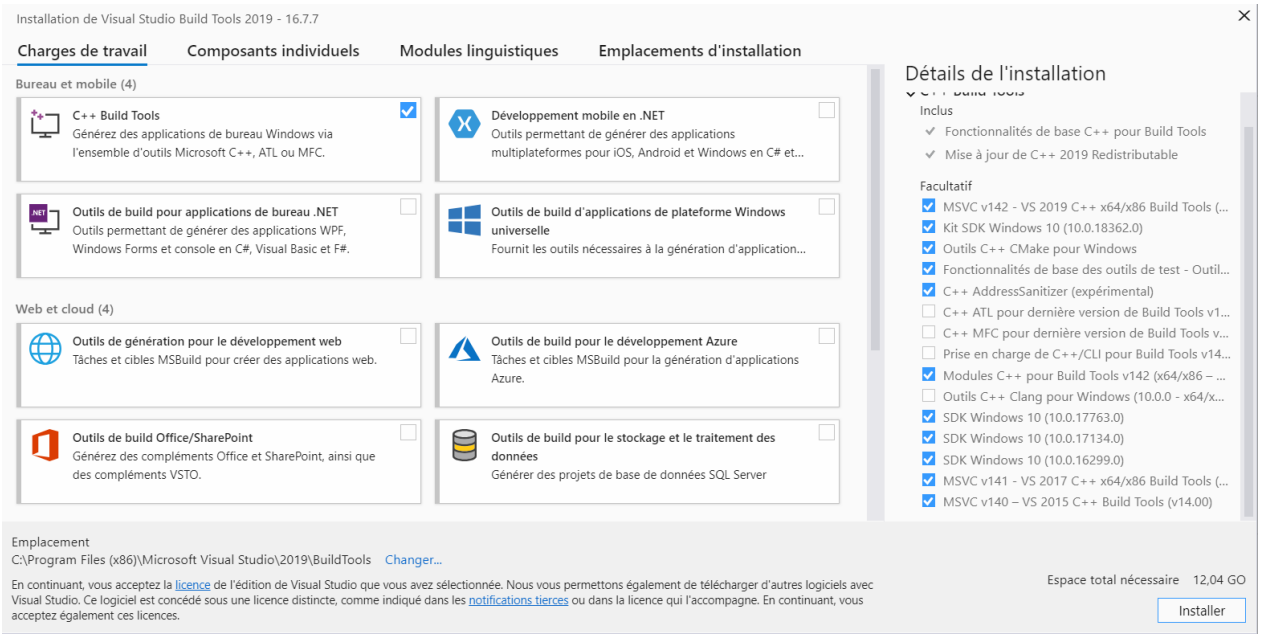
How to install Python and required packages to run Stardist and perform quantifications

1) Stardist (even though developed in Python) relies on a C++ extension. We first need to install a C++ compiler.
   Download and install Build tools for Visual Studio:
   https://visualstudio.microsoft.com/downloads/

   You should get a window like this:



   Select C++ Build tools and select the following dependencies on the right side:

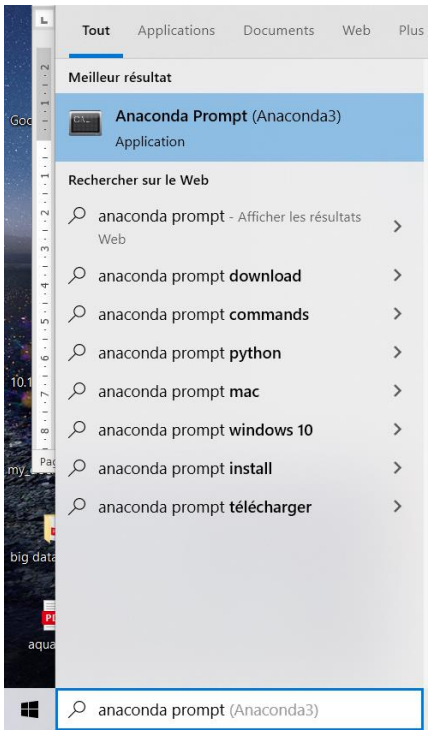


Click install and once finished restart your computer.

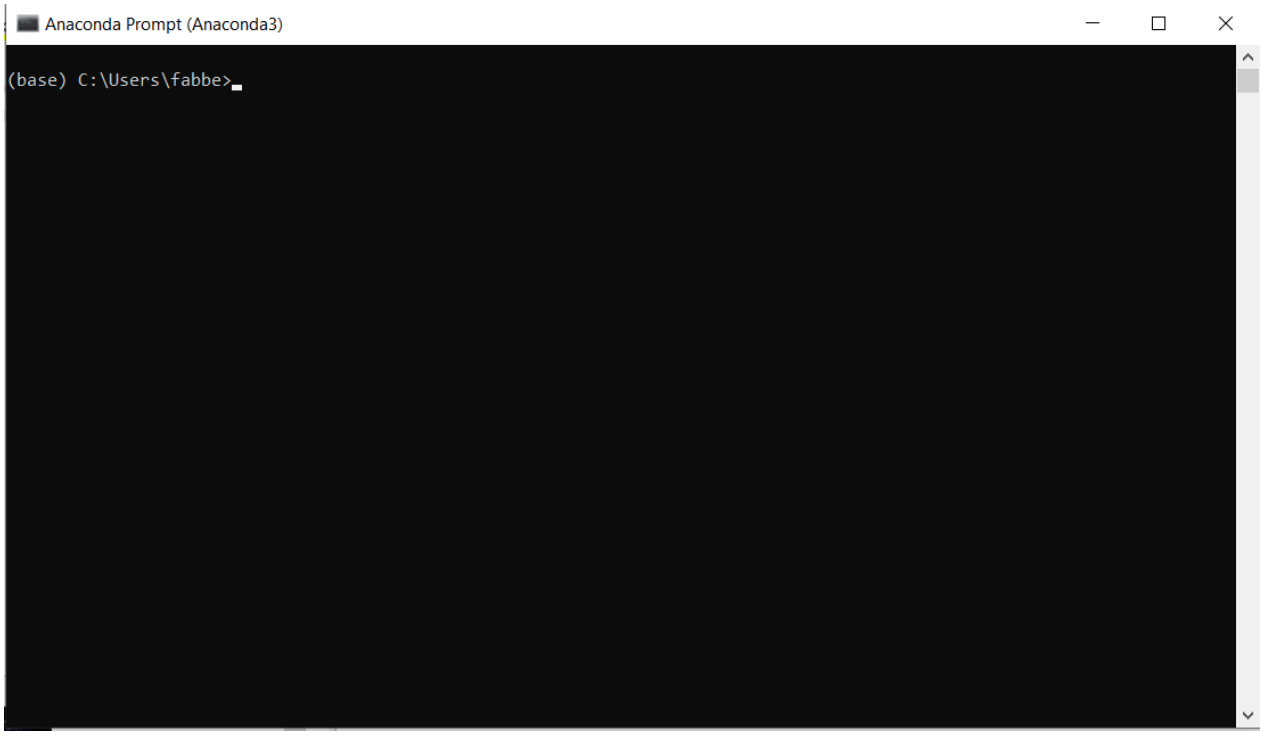
2) Install Anaconda: https://problemsolvingwithpython.com/01-Orientation/01.03-Installing-Anaconda-on-Windows/

   Note: Anaconda is a Python distribution platform, it is particularly useful to install Python packages and avoid compatibility problems between Python package as we will see below.

3) Open anaconda prompt in windows:



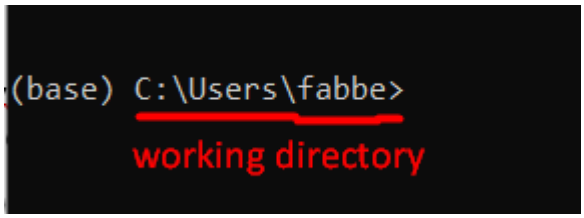
Anaconda prompt is a command line interface to manage environments, package and dependencies. You should see appear a window like this:



Note:

(base) is the default environment in anaconda. As we will see below, we can create our own environments. An environment is a directory that contains a specific collection of packages that you have installed. Each environment is independent. It was made to answer the following problem: Let's say you want to install an older version of a package for one purpose BUT you don't want to delete the last version of that package because you need it for another purpose. The solution is then to create one environment for each version of the package.

4) Using the following command line, navigate to the working directory where the file quantenv.yml is located on your computer.



Use `cd..` to go backward in folders
Use `cd <my_folder>` to go upward

You can use the command `dir` to list all folders and file in the current directory.

5) Use the following command line to create your environment:

`conda-env create --name <myenv> --file quantenv.yml`

Change <myenv> with what name you would like to have for your new environment.

Note: The .yml file indicates to anaconda to install all package and dependencies needed to run stardist and the morphological quantification script.

6) Activate your environment using the following command line:

`activate myenv`

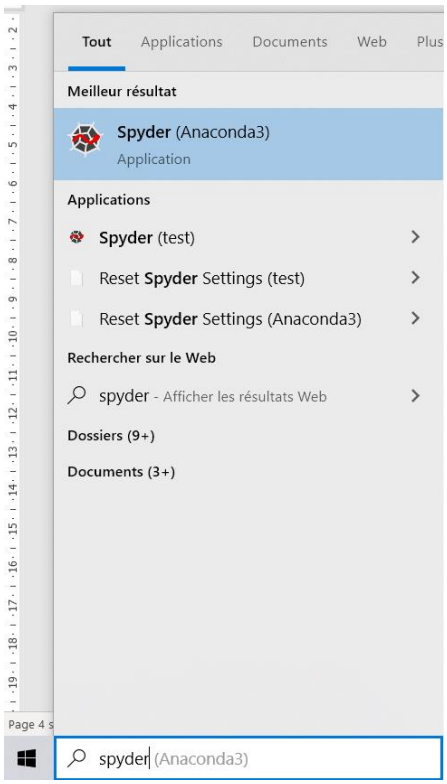
7) Now we need to install a last python package manually, use the following command line:

`pip install shapely`

Remember to activate your environment prior to installing a package

Note: pip is the package installer for Python.

8) The installation is done. From now on we will use Python through a Python Development Environment called Spyder. To use Spyder you can either open Anaconda prompt, activate your environment and type `Spyder` or you can go to windows and open Spyder from there (as show below). Remember to open the Spyder associated with your environment. The Spyder associated with your environment is named Spyder (<myenv>).


Tout
Applications
Documents
Web
Plus
Meilleur résultat
Spyder (Anaconda3)
Application
Applications
Spyder (test)
Reset Spyder Settings (test)
Reset Spyder Settings (Anaconda3)
Rechercher sur le Web
spyder - Afficher les résultats Web
Dossiers (9+)
Documents (3+)
spyder (Anaconda3)