ASSIGNMENT 1.A

Name : Achal Rajesh Mate
Roll No : 2203541
Enroll NO :MITU20BYCSD011
Branch : CSE
Class = TY CSE IS – 3
Batch : B
Guided By : Prof. Nagesh Jadhav Sir

Title:- Installation and Configuration of machine learning environment with Anaconda on windows or Ubuntu (Jupyter notebook, spyder, python, pycharm)

Objectives:-

1. To configure computers and anaconda environment
2. To learn and use IDE for ML programming

Theory:

1. Anaconda installation and configuration steps with screenshots

What is Anaconda?

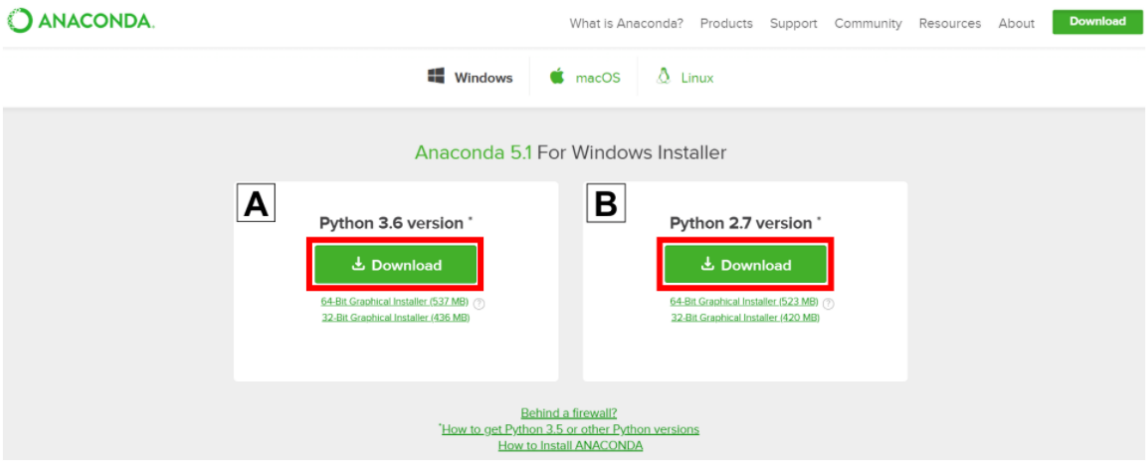
- Anaconda is a free and open-source distribution of Python and R programming languages for data science and machine learning.
- This will help you simplify your Python deployment and later on your package management.
- Anaconda comes with over a 1500 packages (including the package management system conda) and a GUI named Anaconda Navigator.
- The Anaconda Navigator also install some applications by default such as Jupyter Notebook, Spyder IDE and Rstudio (for R).

Download and Install Anaconda

Step 1: Go To Anaconda.com

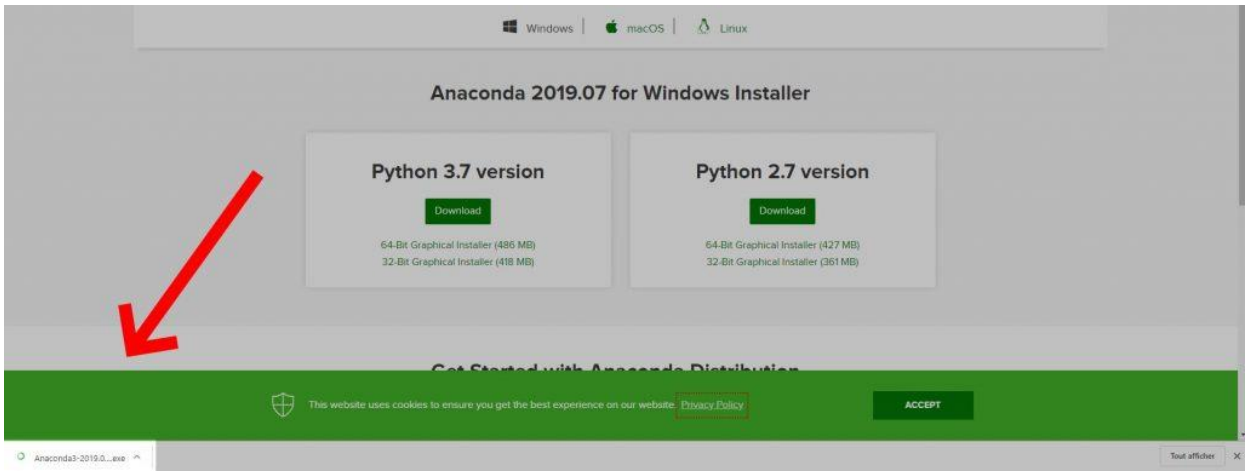
Go to Anaconda.com, and download the Anaconda version for Windows.

Step 2: Download the Python 3 version for Windows.

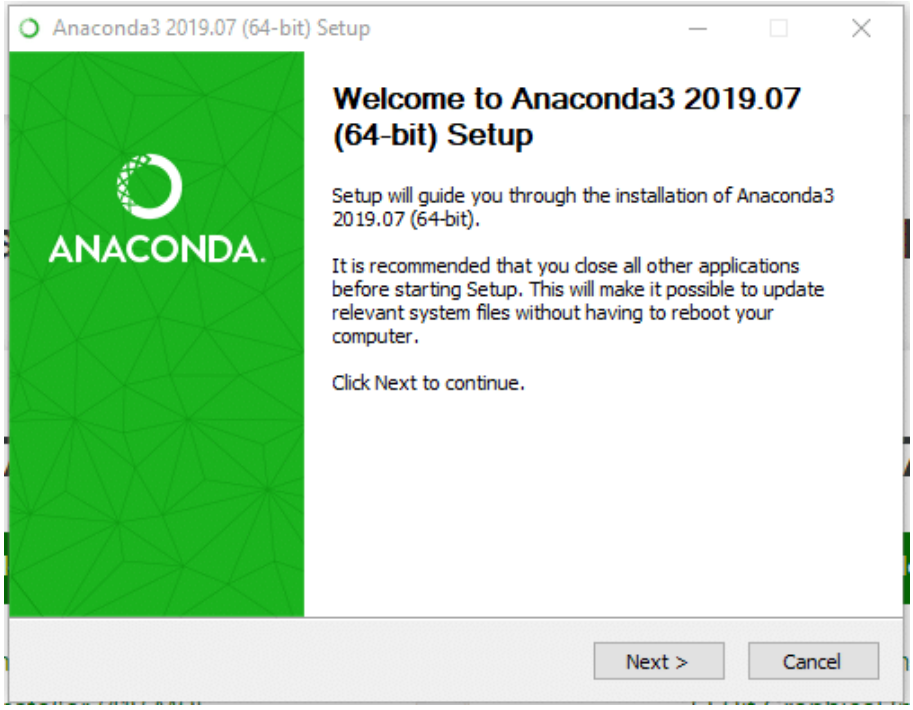


Step 3: Double-click on the executable file.

To get the installation of Anaconda started on your operating system open the executable file in your Download folder.

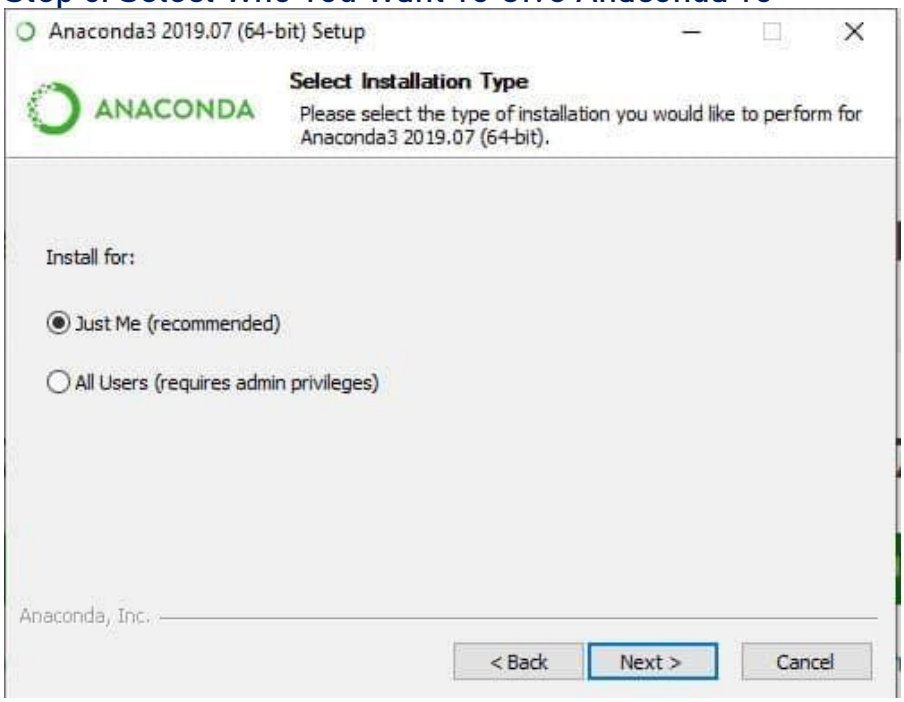


Step 4: Click Next



Step 5: Click I agree to the terms and conditions

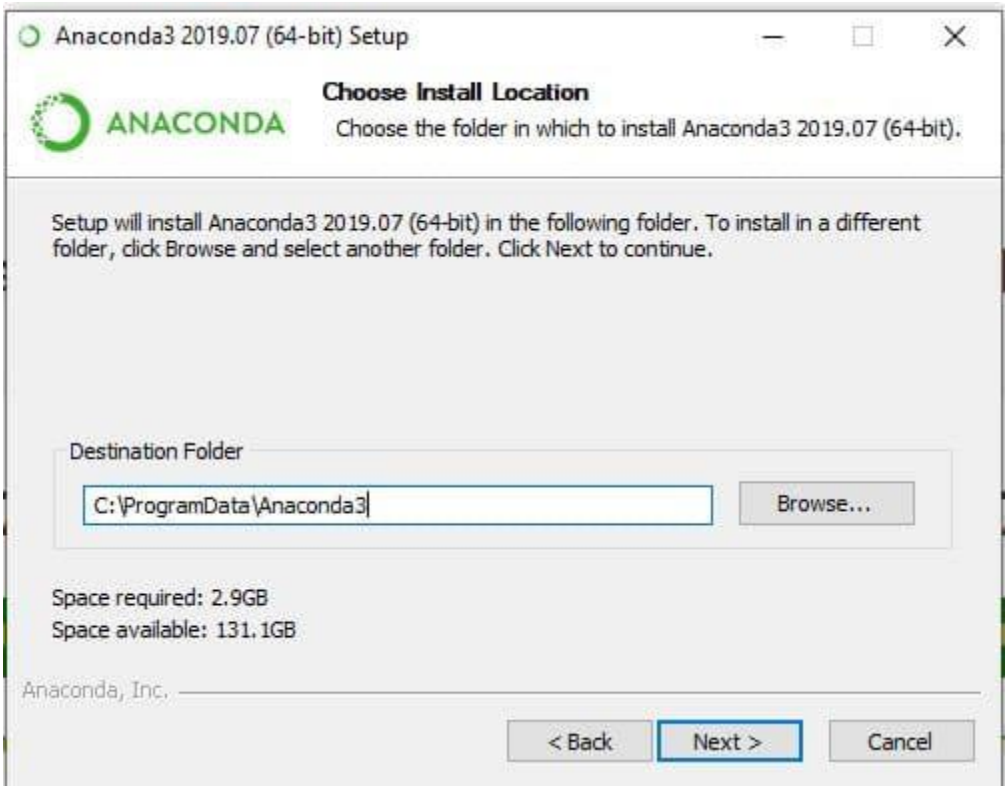
Step 6: Select Who You Want To Give Anaconda To



This step will ask you if you want to install Anaconda just for you or for all the users using this PC. Click “Just-Me”, or “All users”, depending on your preference. Both options will do but to select “all users” you will need admin privileges.

Step 7: Select the installation location

If you have selected “All users”, by default, Anaconda will get installed in the *C:|ProgramData|Anaconda3* folder. So make sure that you have at least the right amount of space available to install the subdirectory comparing it the the space required.

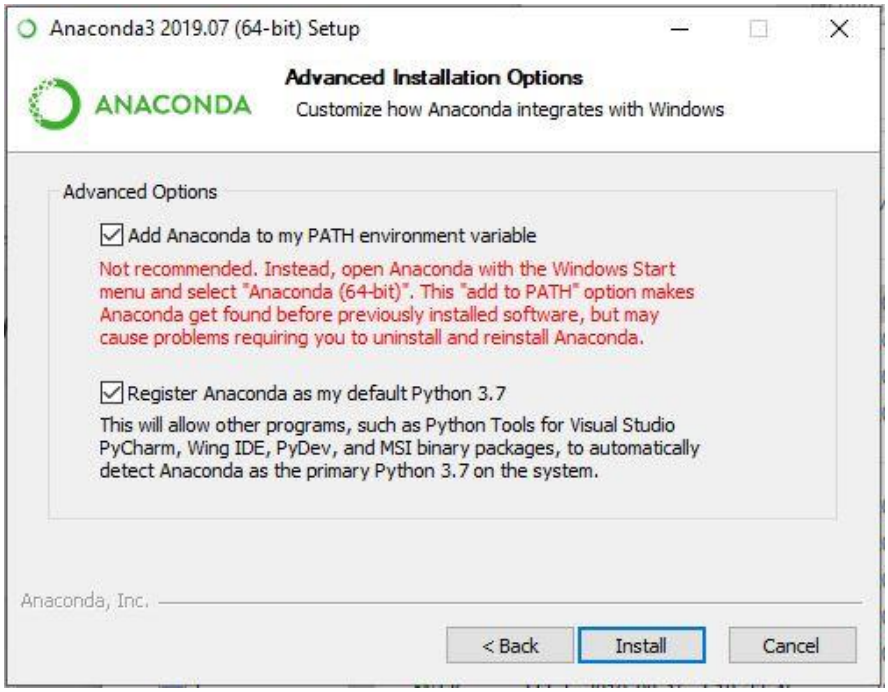


Step 8: Select the environment variables

Depending on if you have any version of Python already installed on your operating system, or not, to do different set-up.

If You Are Installing Python For The First Time

Check the *Add Anaconda to my PATH environment variable.* This will let you use Anaconda in your command prompt.

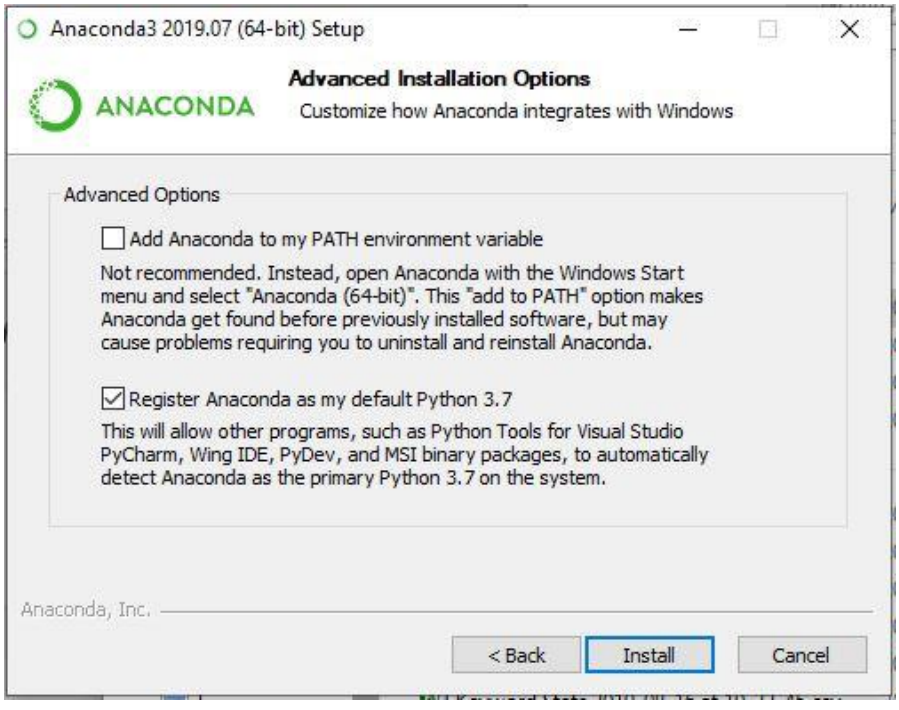


If You Already Have Python Installed

Leave Add Anaconda to my PATH environment *variable* unchecked.

Leaving it unchecked means that you will have to use Anaconda Command Prompt in order to use Anaconda.

So, unless you add the PATH later, you will not be able to use Python from your command prompt.



Python is not usually included by default on Windows, however we can check if any version exists on the system.

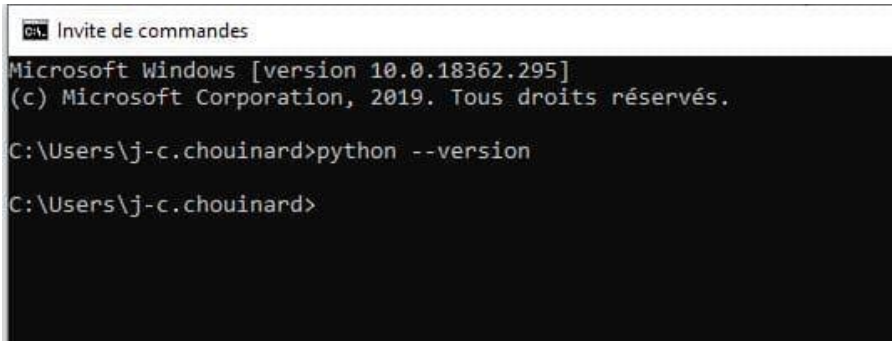
To know if you have Python Installed.

Go to Start Menu and type “Command Prompt” to open it.

1. Type the following command and hit the Enter key “python --version”
2. If nothing happens, you don’t have Python installed. Otherwise, you will get this result.

$ python --version

Python 3.7.0



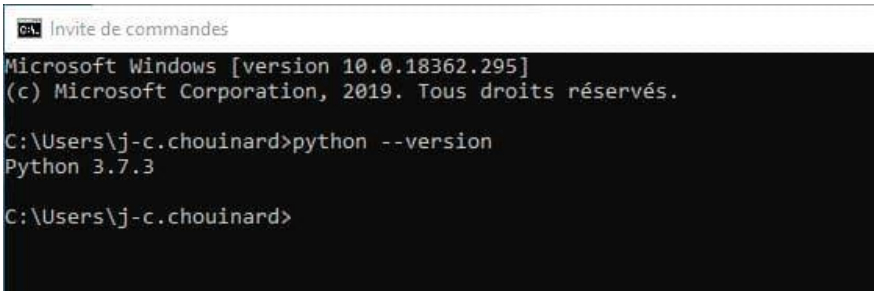
You don’t have Python

Step 9: Click Next and then “Finish”.

Step 10: See if Python Is Installed

If everything went right you can repeat the step 7 by opening your command prompt and enter “python --version”.

If everything is right, you’ll see this result.



You have python

2. Conda commands and their usage
    - The `conda` command is the preferred interface for managing intstallations and virtual environments with the Anaconda Python distribution.
    - With conda, you can create, export, list, remove, and update environments that have different versions of Python and/or packages installed in them. Switching or moving between environments is called activating the environment. You can also share an environment file.

1. To create an environment:
   `conda create –name myenv`
   This creates the myenv environment in in `/envs/`. No packages will be installed in this environment.

2. When conda asks you to proceed, type `y`:
   `proceed([y]/n)?`

3. To create an environment with a specific version of Python:
   `conda create -n myenv python=3.6`

4. To create an environment with a specific package:
   `conda create -n myenv scipy`

5. Activating an environment
   Activating environments is essential to making the software in the environments work well. Activation entails two primary functions: adding entries to PATH for the environment and running any activation scripts that the environment may contain.
   To activate an environment:
   `conda activate myenv`

6. Deactivating an environment
   To deactivate an environment, type:
   `conda deactivate`
   Conda removes the path name for the currently active environment from your system command.

7. Determining your current environment

Use the terminal or an Anaconda Prompt for the following steps.

By default, the active environment---the one you are currently using---is shown in parentheses () or brackets [] at the beginning of your command prompt:

(myenv) $

8. Viewing a list of your environments

To see a list of all of your environments, in your terminal window or an Anaconda Prompt, run:

conda info –envs

9. Viewing a list of the packages in an environment

To see a list of all packages installed in a specific environment:

- If the environment is not activated, in your terminal window or an Anaconda Prompt, run:
- conda list –n myenv
- If the environment is activated, in your terminal window or an Anaconda Prompt, run:Conda list

```
(base) C:\Users\HP>cd Documents

(base) C:\Users\HP\Documents> conda create -n impmodule
Collecting package metadata (current_repodata.json): done
Solving environment: done


==> WARNING: A newer version of conda exists. <==
  current version: 4.10.1
  latest version: 4.11.0

Please update conda by running

    $ conda update -n base -c defaults conda



## Package Plan ##

  environment location: C:\Users\HP\anaconda3\envs\impmodule
```

-

- ```
  Proceed ([y]/n)? y

  Preparing transaction: done
  Verifying transaction: done
  Executing transaction: done
  #
  # To activate this environment, use
  #
  #     $ conda activate impmodule
  #
  # To deactivate an active environment, use
  #
  #     $ conda deactivate


  (base) C:\Users\HP\Documents>conda activate impmodule
  ```
- ```
  (impmodule) C:\Users\HP\Documents>pip install plotly
  Collecting plotly
    Downloading plotly-5.6.0-py2.py3-none-any.whl (27.7 MB)
       |████████████████████████████████| 27.7 MB 131 kB/s
  Collecting tenacity>=6.2.0
    Using cached tenacity-8.0.1-py3-none-any.whl (24 kB)
  Requirement already satisfied: six in c:\users\hp\appdata\local\programs\python\python38\lib\site-packages (from plotly) (1.11.0)
  Installing collected packages: tenacity, plotly
  Successfully installed plotly-5.6.0 tenacity-8.0.1
  ```

- Conclusion:

Thus we have successfully installed Anaconda on windows and active the environment using conda command