Assignment No 1

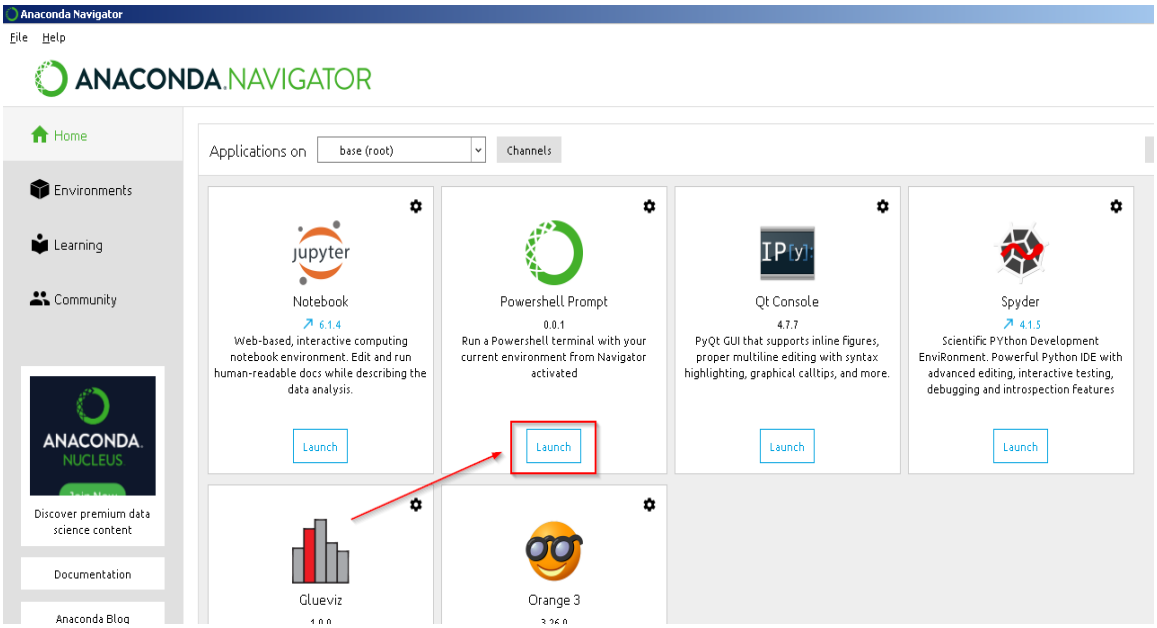
1. After successfully installation of Anaconda and OpenCV as stated in Lecture No 6 – Getting Started with Python and OpenCV, for quick reference have added the link below with steps and please follow the steps :

   a. Download Anaconda (which includes Python for **Windows** in the given link and follow instruction for installation)
      i. https://docs.anaconda.com/anaconda/install/windows/
      ii. https://repo.anaconda.com/archive/Anaconda3-2020.02-Windows-x86_64.exe → **DOWNLOAD Link**

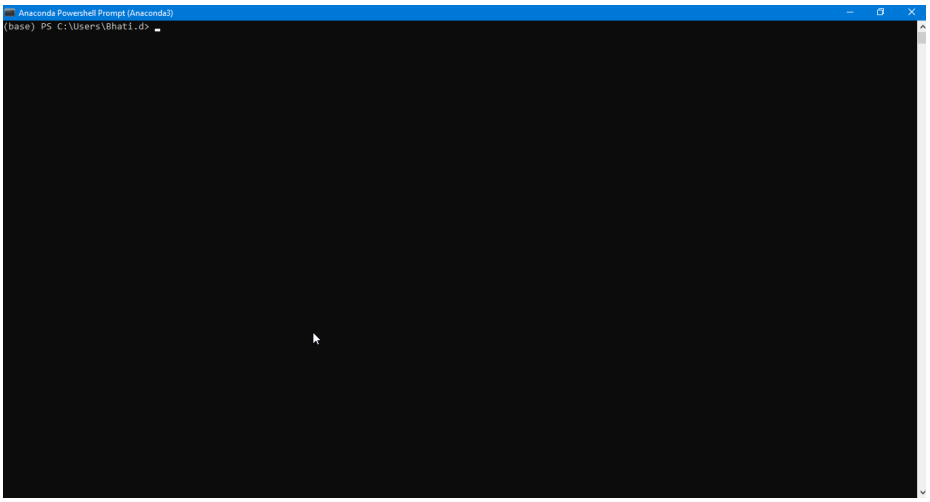
   b. Download Anaconda (which includes Python for **MacOS** in the given link and follow instruction for installation)
      i. https://docs.anaconda.com/anaconda/install/mac-os/ → macOS graphical install
      ii. https://repo.anaconda.com/archive/Anaconda3-2020.02-MacOSX-x86_64.pkg → **DOWNLOAD link**

   c. System Requirements

   d. OpenCV Installation steps :
      i. Open Anaconda Navigator, something like this window would open up and Launch Powershell Prompt



ii. After launching Powershell Prompt, will open up this type of window as shown below



iii. **Write the below mentioned command in owershell prompt, as shown below**
pip install opencv-python

```
(base) PS C:\Users\Bhati.d> pip install opencv-python
Collecting opencv-python
  Downloading opencv_python-4.5.1.48-cp37-cp37m-win_amd64.whl (34.9 MB)
     |                                | 34.9 MB 6.4 MB/s
Requirement already satisfied: numpy>=1.14.5 in c:\users\bhati.d\anaconda3\lib\site-packages (from opencv-python) (1.18.1)
Installing collected packages: opencv-python
Successfully installed opencv-python-4.5.1.48
```

2. After Successfully creating the Software Environment, then please use the attached image Sample1.jpg below

1. Python Script with OpenCV library to perform below tasks –
    I. Draw Red color Rectangle Boxes on Red Suv and White Car
    II. Write label text upon Rectangular Boxes as “Red Suv” and “White Car” with Blue Color
    III. Draw the straight Lane lines with Green color

2. Submit the Python Script along with Final output image with all the above tasks.

Note : There are some known issues while using matplot library to view the image in Spyder Environment, which is mostly related to image color representation, for our task this should not be problem, we would be mostly using OpenCV API’s !