Python Guideline for Beginner

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1 Introduction

In March 2020 python is the most popular programming languages were searches for tutorial by 31.17% PYPL[1].
Anaconda is a free and open-source distribution of the Python programming languages which aims to simplify the package management and deployment. Anaconda work on Windows, Linux, and Mac OS and helps manage libraries, dependencies, and the environment. The virtual environment manager allowing you to install independent development environments and switch from one to the other (like virtualenv).
This document will guide the starter on how to set up the environment from scratch.
Skip the introduction part and start immediately by go to Getting started section.

2 Software Install

This document only covers the scope of install the software base on Linux. However, the window installation is very similar(google on how to install Anaconda

for window).
Download Anaconda from the official website:Anaconda.
Select Linux and then Download the installer.Navigator is automatically installed when you install Anaconda version 4.0.0 or higher.If you have Miniconda or an older version of Anaconda installed, you can install Navigator from an Anaconda Prompt by running the command:" conda install anaconda-navigator ".
The Anaconda_navigator user interface looks like the picture below:

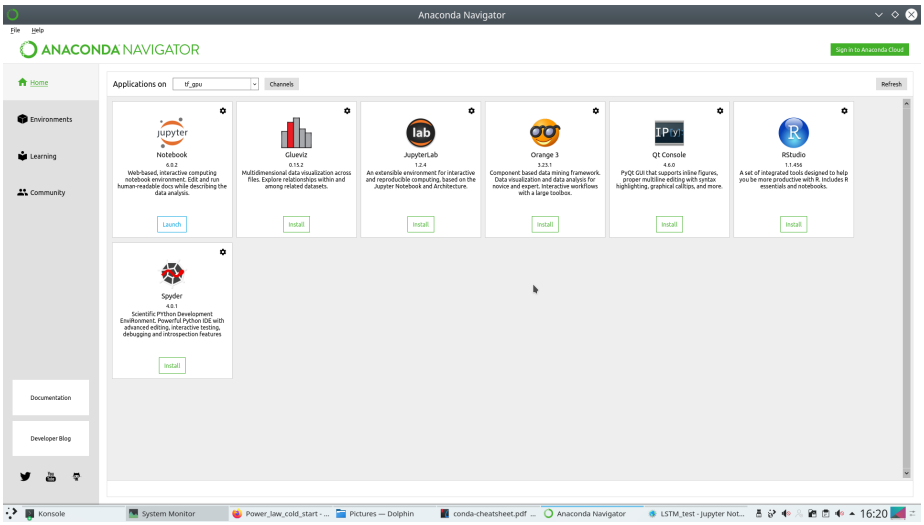

Figure 1: Anaconda navigator

Now you can install Jupyter notebook and Sypder for working with Python.
Download conda cheat-sheet (google with key word conda cheat sheet) to see how to create an virtual environment and activate it.
The link below give you more information on what is Anaconda and why do we use it: Anaconda.
An alternative option is using Anaconda-navigator graphical interface.

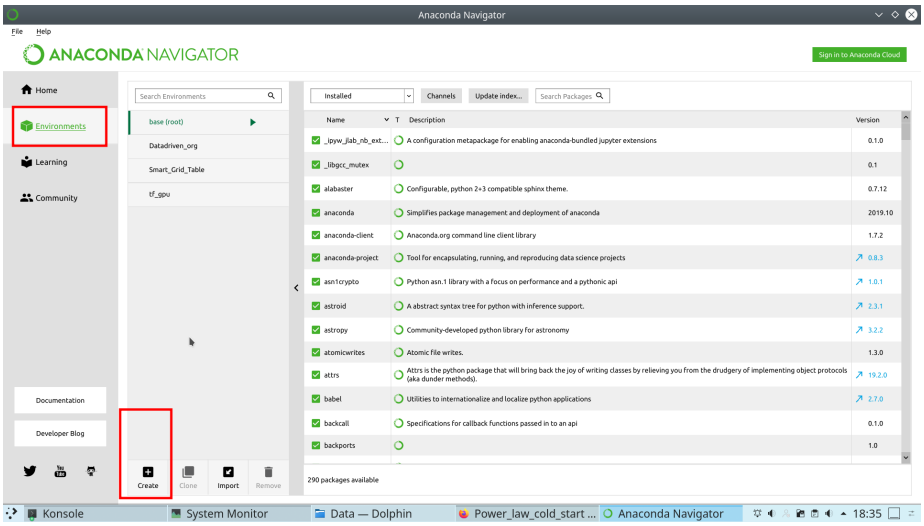

Figure 2: create environment

A few standard packages will be installed when creating a new environment. However, most of the useful packages (libraries) need to be installed manually. There are multiple way to install the missing packages.Search for the missing packages and install with anaconda-navigator. Look at instruction on pictures below:

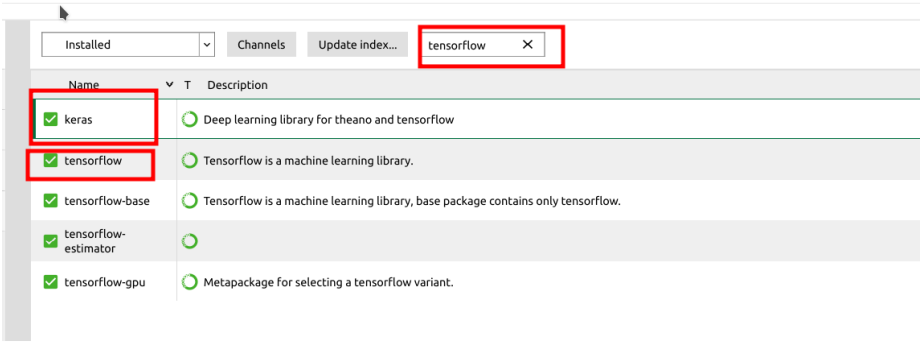

Figure 3: install packages

Installing packages with Console. Keep in mind that the virtual environment needs to be activated before installing the missing packages.

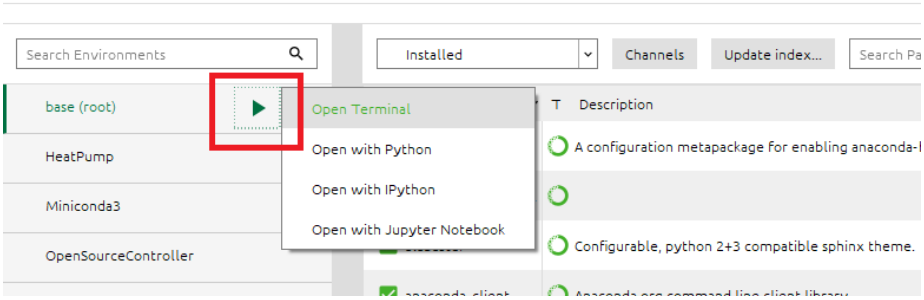

Figure 4: Open terminal

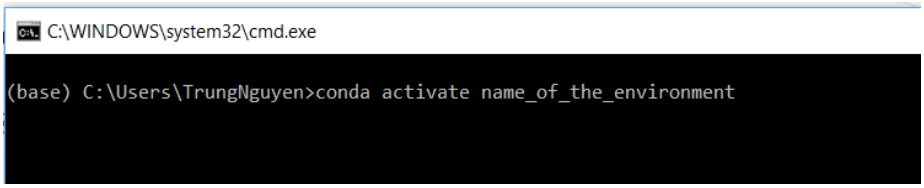

Figure 5: Activate Environment

Find the missing packages from :Anaconda repo.
Copy one of the command in the red box and paste to the terminal.

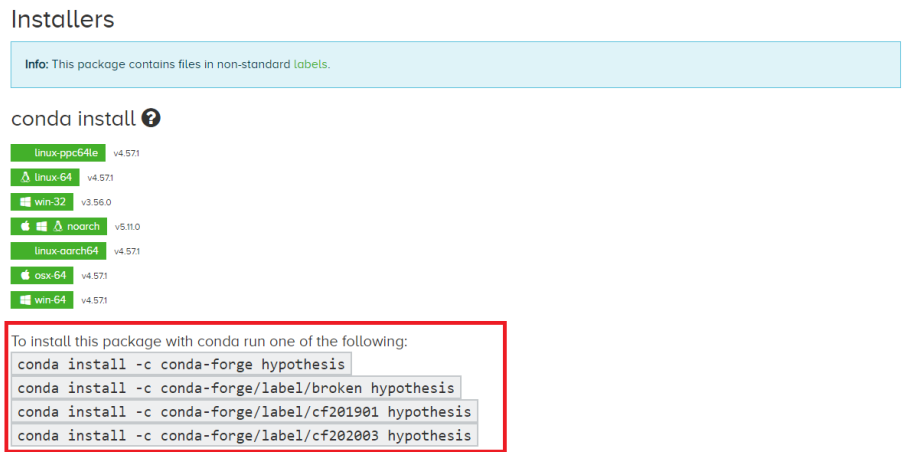

Figure 6: Install package

3 Getting started

The easiest way to get start is using a Jupyter notebook. "The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. Uses include: data cleaning and transformation, numerical simulation, statistical modeling, data visualization, machine learning, and much more." [**Jupyternotebook**]. There are several alternative online Jupyter note book available for free such as Google Colab,Kaggle,...etc. The instruction on how to setup these online platform will be discusses in separate document.
Open Jupyter note book by click "Launch"

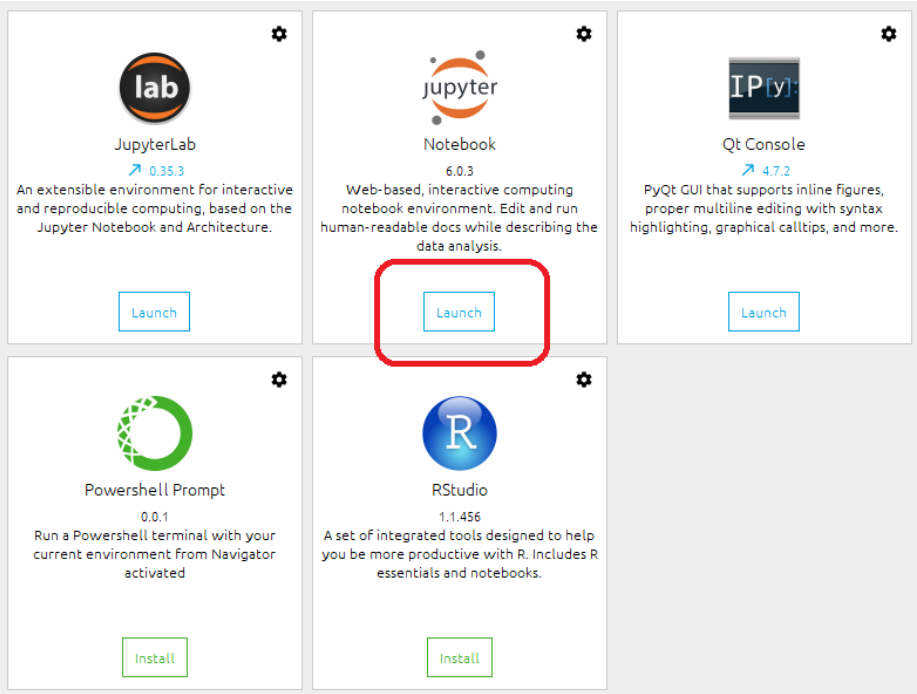

Figure 7: Open Jupyter notebook

Figure 8: Create a new python 3 project

Now try to write something with Jupyter notebook and click Run button or "Shift-Enter"

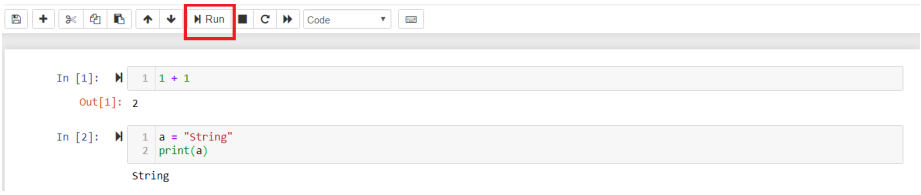

Figure 9: Simple example

Downloading Notebook example. Click execute on Binder to try it online on your browser

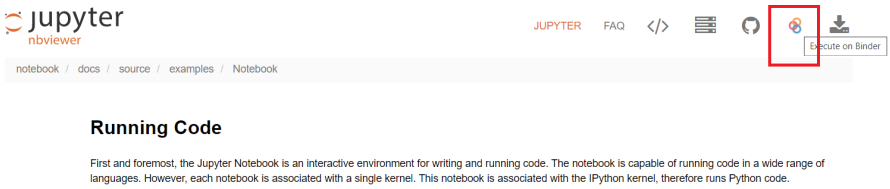

Figure 10: Online example

Github example folder.
Using google search with key world "Jupyter notebook for beginner"

4 Link to relevant information

Anaconda user guide cheatsheet.
Navigator docs

5 List of Documentation

1. Python Guideline for Beginner.
2. Setting up Online Python Notebook
3. update...

6 Recommendation Courses

Machine learning by Andrew Ng.
Deep Learning using FastAI by Jeremy Howard.

References

[1] URL: http://pypl.github.io/PYPL.html.