DS 5230
Unsupervised Machine Learning and Data Mining
Setting Up a Python Virtual Environment with a Jupyter Notebook Kernel Using Conda

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Install Anaconda or MiniConda.

https://docs.conda.io/projects/conda/en/latest/user-guide/install/index.html#installing-conda-on-a-system-that-has-other-python-installations-or-packages

I suggest MiniConda because it is light weight.

Once one of the above is installed:

On the Windows platform go to the start window, find the group of Anaconda (MiniConda) applications and select the Anaconda (MiniConda) Powershell Prompt.

On the MacOS platform open a terminal.

For both, type: conda –version on the command line

Did you get a conda version back?

Yes – Good to go.

Once everyone is getting a conda version back we can proceed.

https://docs.conda.io/projects/conda/en/latest/user-guide/tasks/manage-environments.html

At the command prompt enter the following:

(base) > conda create --name test_venv python

Once the environment is created enter the following at the command prompt:

(base) > conda activate test_env

Now your command prompt looks like this:

(test_env) >

To see all installed packages, enter the following at the command prompt:

(test_env) > conda list

To install the latest version of Pandas, enter the following at the command prompt:

(test_env) > conda install pandas=1.5.2

To install the latest version of SKLearn, enter the following at the command prompt:

(test_env) > conda install scikit-learn=1.2.0

To install the latest version of SciPy, enter the following at the command prompt:

(test_env) > conda install scipy=1.10.0

To install the latest version of seaborn, enter the following at the command prompt:

(test_env) > conda install seaborn=0.12.2

To install the latest version of statsmodels, enter the following at the command prompt:

(test_env) > conda install statsmodels=0.13.5

To install the jupyter, enter the following at the command prompt:

(test_env) > conda install -c anaconda jupyter

To set up a kernel for a jupyter notebook to use this test_venv, enter the following at the command prompt:
https://ipython.readthedocs.io/en/stable/install/kernel_install.html

(test_env) > python -m ipykernel install --user --name ***test_venv*** --display-name "Python (***test_venv***)“

To install the Matplotlib, enter the following at the command prompt:

(test_env) > conda install -c conda-forge matplotlib

We have completed the installation of the virtual environment test_venv.

To start up an instance of jupyter notebook do the following.

On the Windows platform go to the start window, find the group of Anaconda (MiniConda) applications and select the Anaconda (MiniConda) Powershell Prompt.

On the MacOS platform open a terminal.

Enter the following at the command prompt:

(base) > jupyter notebook

Now start up a new jupyter notebook with the Python(test_venv) kernel and try a few commands.