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Installing FBProphet/Prophet for Time Series Forecasting in Jupyter Notebook

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Time series forecasting is one of most demanding object in machine learning. The easiest way for projecting your time series data is using a module named Prophet (a.k.a. fbprophet). Prophet is a procedure for forecasting time series data based on an additive model where non-linear trends are fit with yearly, weekly, and daily seasonality, plus holiday effects.

likely into beginner and whenever the beginner feel hard about installing it, they quit the machine learning.

After struggling about the installation for several hours, in this post I want to share about how I face the problem. I hope this post can help others who have the same problem with me.

Problem Declaration

> How to install Prophet (fbprophet) in your local computer?

Solution

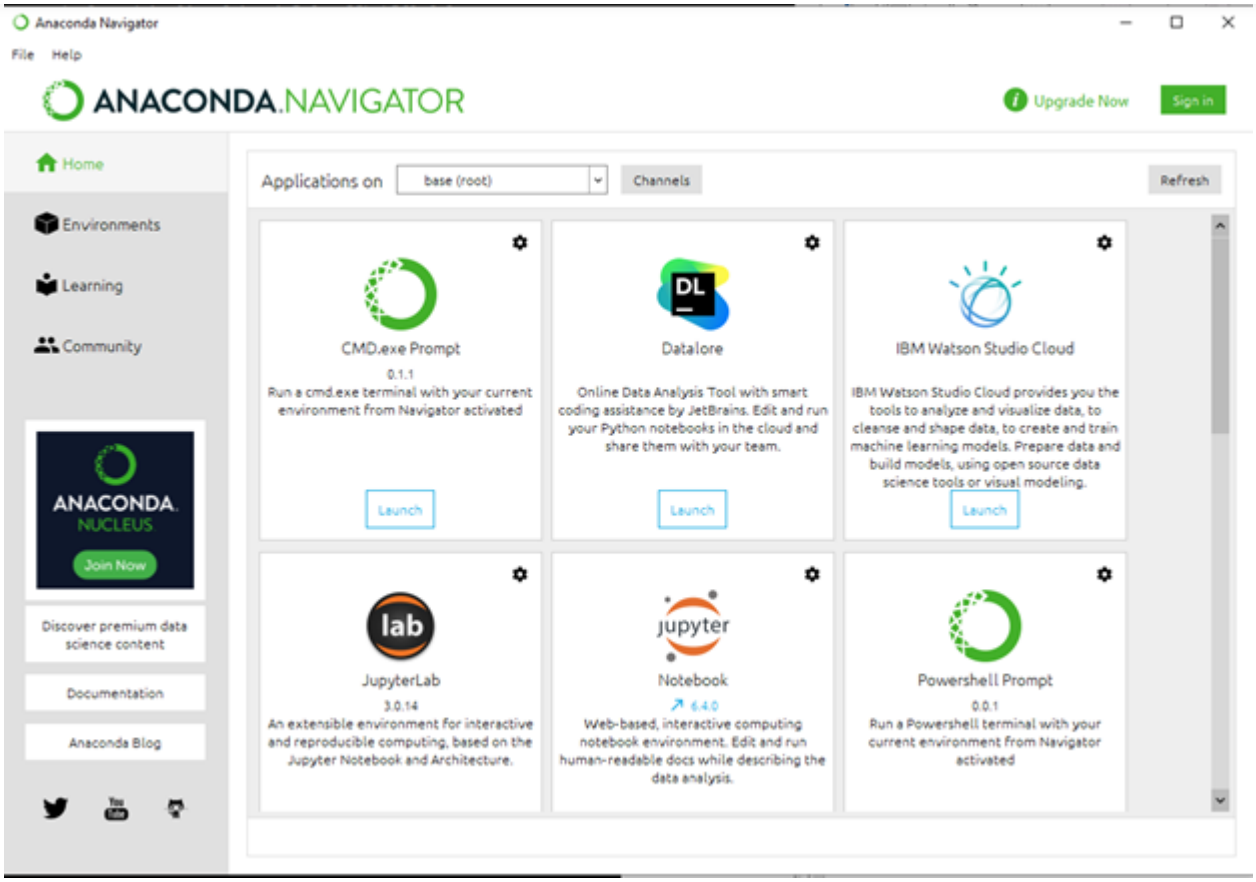
The problem actually exist for people who had installed Python > 3.9 from the original source. We don't need to blame anyone, but Prophet will only work for Python < 3.9. Well, don't worry if you had installed it, because Python has virtual environment named Anaconda.

Anaconda is a distribution of Python and R in scientific computation. In this post, I will not talk about it, because it beyond the topic. But, I believe that everyone who read this post has Anaconda in their device because we want to install prophet in the jupyter notebook environment.

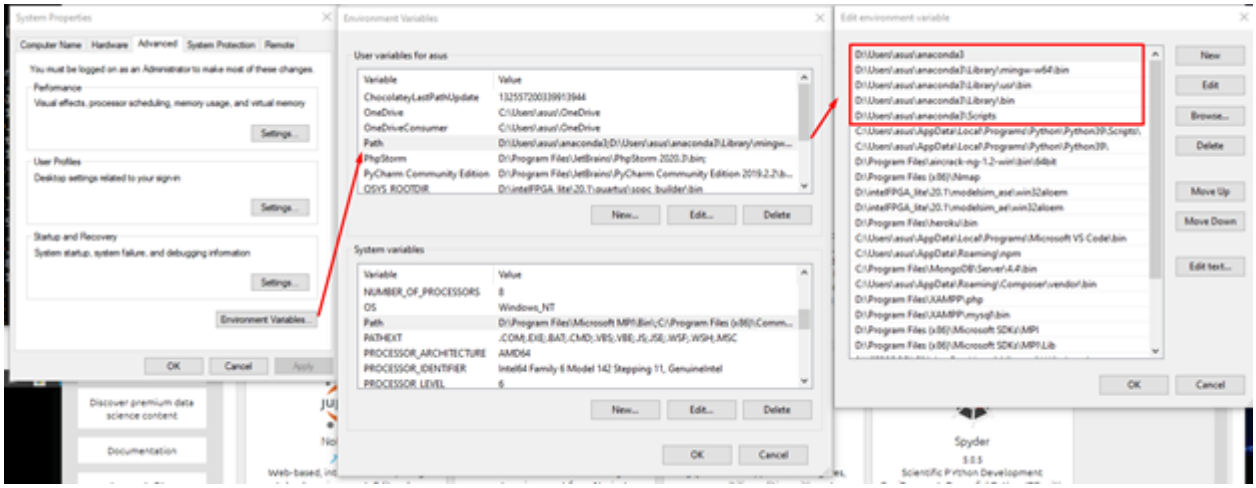
I will credit the this discussion in stack overflow as the reference for my solution. So, after do some self-questioning, I decide to build new environment in Anaconda, this environment will only focus in time series computation. So whenever I need it, I will use it without any fear of error anymore.

Without much talk, let's go into the solution

1. First install Anaconda or miniconda in your Windows machine. You can get the installation page here.



2. Don't forget to add anaconda python path into environment variable inside Windows system Path.



3. After have anaconda installed in your device and adding it into windows system path. You must be can access anaconda using `conda` command in your command line

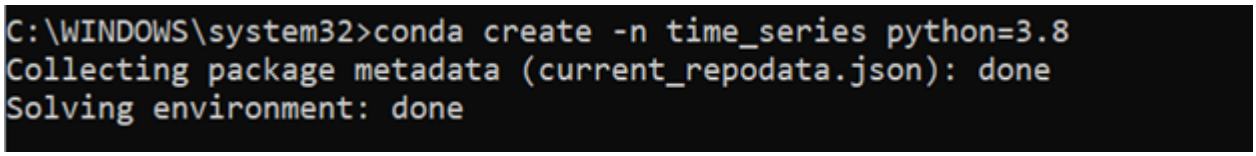
```
C:\Users\asus>conda
usage: conda-script.py [-h] [-V] command ...

conda is a tool for managing and deploying applications, environments and packages.

Options:
```

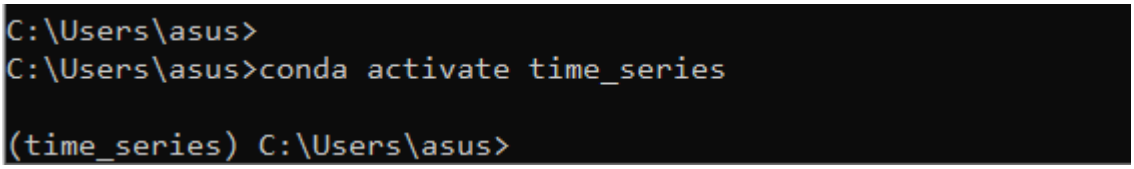
4. Here, I will build new virtual environment called time_series, this environment will run in Python 3.8, so the command that I use is this

```
conda create -n time_series python=3.8
```



5. After a few time, the installation for new environment will done, now you can access your environment using this command

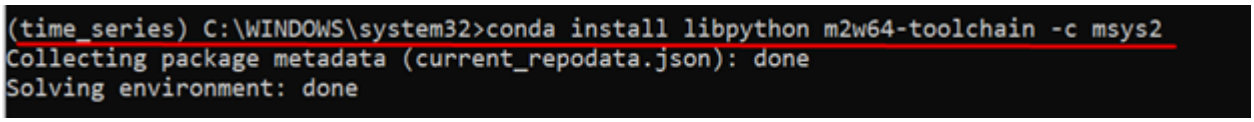
```
conda activate time_series
```



You see, now your command line have the environment named 'time_series' before the directory location.

6. Install the C++ compiler, using this command

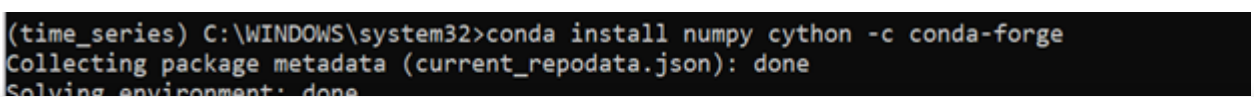
```
conda install libpython m2w64-toolchain -c msys2
```



The installation will take several minutes based on your internet connection. The libpython library will automatically create and setup distutils.cfg into our Pythonpath\Lib\distutils. Because, we are using new virtual environment, we don't need to worry about the installation will failed.

7. Now let's do installation of the dependencies that will be required by Prophet (a.k.a. fbprophet).

```
conda install numpy cython -c conda-forge
```



```
(time_series) C:\WINDOWS\system32>conda install matplotlib scipy pandas -c conda-forge
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

```
conda install pystan -c conda-forge
```

```
(time_series) C:\WINDOWS\system32>conda install pystan -c conda-forge
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

```
conda install -c anaconda ephem
```

```
(time_series) C:\WINDOWS\system32>conda install -c anaconda ephem
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

8. Install the library that will used for your time series forecasting environment

scikit-learn

```
(time_series) C:\WINDOWS\system32>pip install scikit-learn
Collecting scikit-learn
  Downloading scikit_learn-0.24.2-cp38-cp38-win_amd64.whl (6.9 MB)
     |                                | 6.9 MB 3.3 MB/s
```

auto-arima (pmdarima)

```
(time_series) C:\WINDOWS\system32>pip install --user pmdarima
Collecting pmdarima
  Using cached pmdarima-1.8.2-cp38-cp38-win_amd64.whl (596 kB)
Requirement already satisfied: scikit-learn>=0.22 in d:\users\asus\anaconda3\envs\
mdarima) (0.24.2)
```

fbprophet

```
(time_series) C:\WINDOWS\system32>conda install -c conda-forge fbprophet
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

I just realize that the fbprophet name had been change into Prophet from this discussion

So, don't forget to install Prophet too, using the command above

```
pip install pystan==2.19.1.1 prophet
```

or

```
conda install -c conda-forge prophet
```

9. Test the prophet modules is it installed or not

```
(time_series) C:\Users\asus>python
Python 3.8.11 (default, Aug  6 2021, 09:57:55) [MSC v.1916 64 bit (AMD64)] :: Anaconda, Inc. on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> from prophet import Prophet
>>>
```

Well the testing is done and there is no error.

Conclusion

In this post, I was explained about how to install fbprophet/prophet in your device. This post is tested and work in my device (Windows 10). The main problem of the installation, in my case because I already installed python 3.9 so, the prophet can't be installed. I don't want to reinstall the python from my device, so I use anaconda environment to build new environment for my time series job.

Lastly, thanks for read this article into this end. I hope it gonna be useful
Have a Nice Code ✌️