

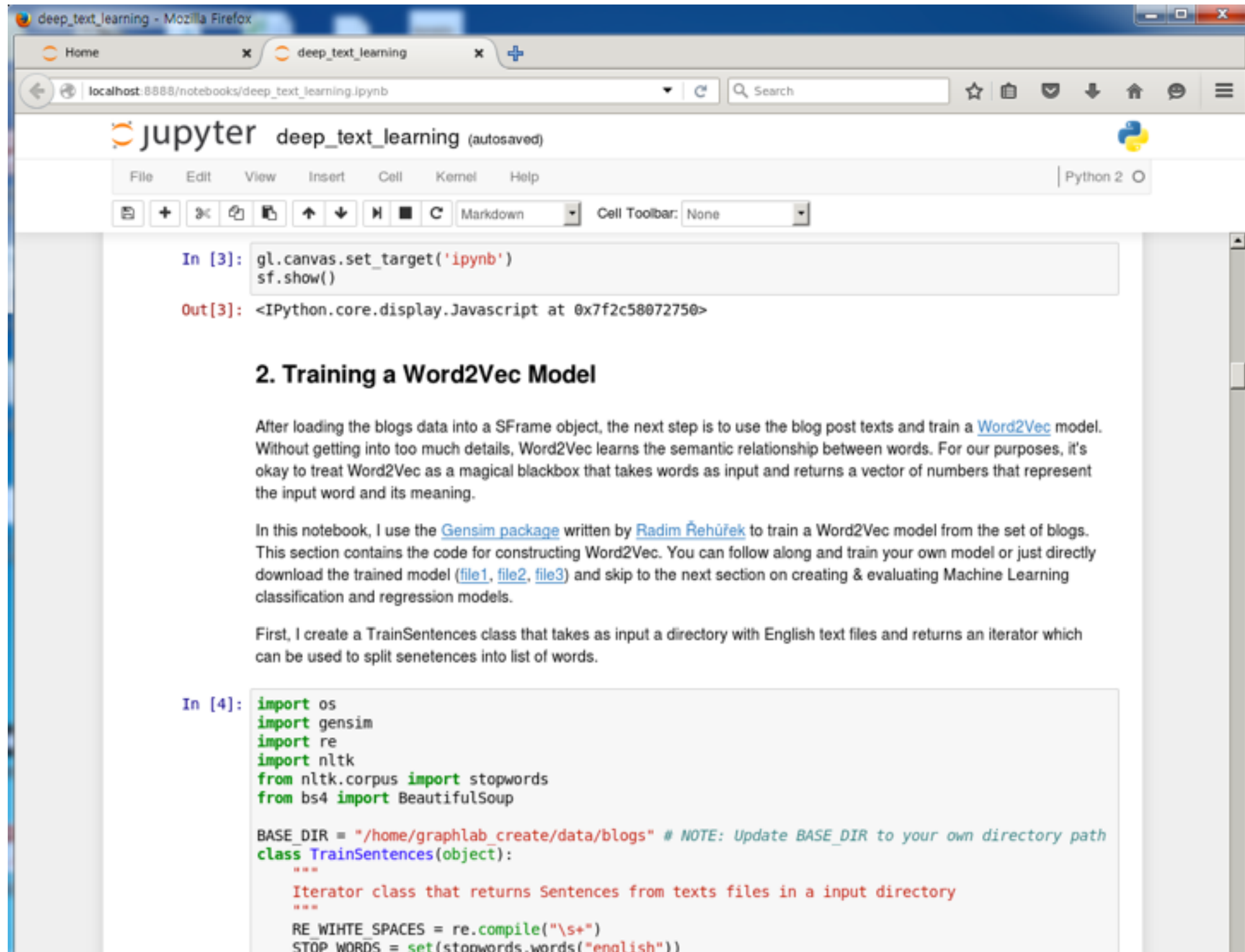
iPython 사용하기 (X11 Forwarding)

2015. 11. 19

iPython 관련자료

- iPython notebook은 본래 파이썬의 문서를 효과적으로 하기 위해 만들어졌지만, ipython이 여러모로 편한점이 있어 이를 이용하여 코딩하는 사람들이 있습니다.
- iPython을 띄우면 웹브라우저에 코딩할 수 있는 화면이 뜨는데 일종의 편한 에디터라고 생각하시면 됩니다.
- 관련자료
 - 공식 홈페이지 : <http://ipython.org/>
 - 튜토리얼 : <http://www.slideshare.net/TaeYoungLee1/20150306-ipython>

iPython 예시화면



deep_text_learning - Mozilla Firefox

Home x deep_text_learning x +

localhost:8888/notebooks/deep_text_learning.ipynb

jupyter deep_text_learning (autosaved)

File Edit View Insert Cell Kernel Help Python 2

In [3]: `gl.canvas.set_target('ipynb')`
`sf.show()`

Out[3]: <IPython.core.display.Javascript at 0x7f2c58072750>

2. Training a Word2Vec Model

After loading the blogs data into a SFrame object, the next step is to use the blog post texts and train a [Word2Vec](#) model. Without getting into too much details, Word2Vec learns the semantic relationship between words. For our purposes, it's okay to treat Word2Vec as a magical blackbox that takes words as input and returns a vector of numbers that represent the input word and its meaning.

In this notebook, I use the [Gensim package](#) written by [Radim Řehůřek](#) to train a Word2Vec model from the set of blogs. This section contains the code for constructing Word2Vec. You can follow along and train your own model or just directly download the trained model ([file1](#), [file2](#), [file3](#)) and skip to the next section on creating & evaluating Machine Learning classification and regression models.

First, I create a TrainSentences class that takes as input a directory with English text files and returns an iterator which can be used to split sentences into list of words.

In [4]: `import os`
`import gensim`
`import re`
`import nltk`
`from nltk.corpus import stopwords`
`from bs4 import BeautifulSoup`

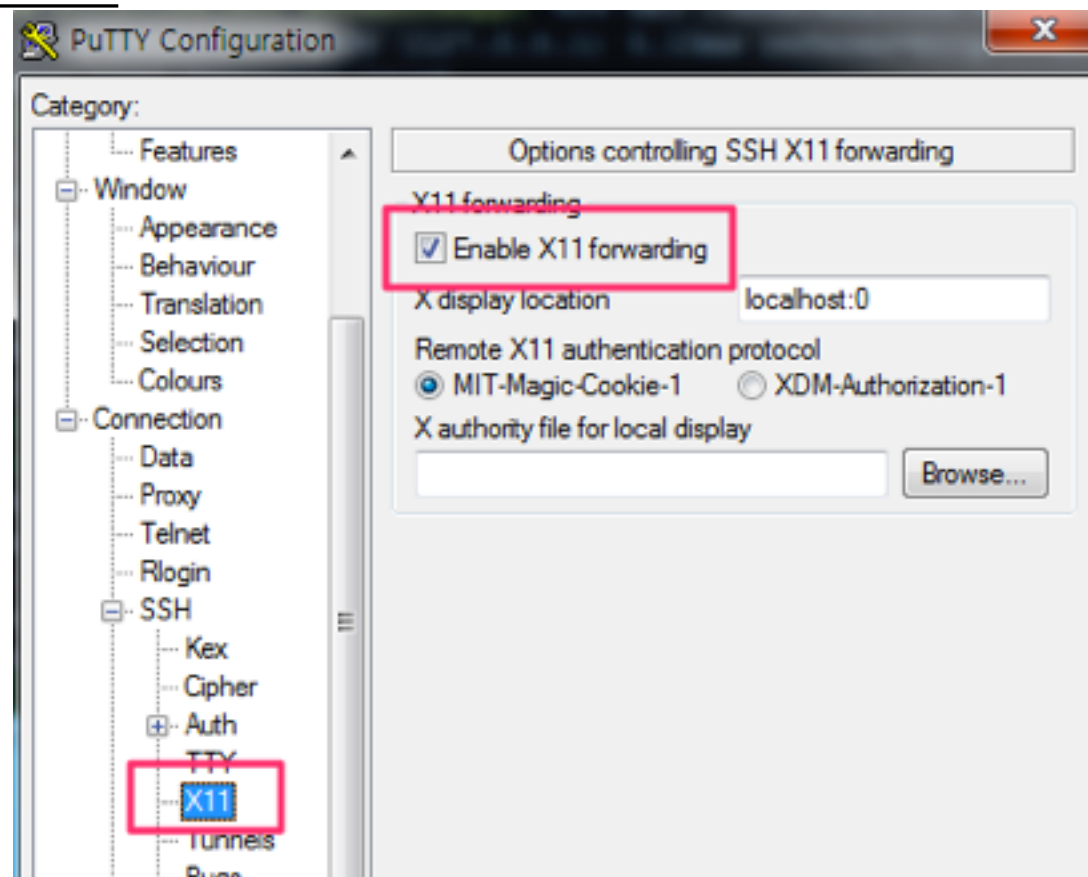
`BASE_DIR = "/home/graphlab_create/data/blogs" # NOTE: Update BASE_DIR to your own directory path`
`class TrainSentences(object):`
 `"""`
 `Iterator class that returns Sentences from texts files in a input directory`
 `"""`
 `RE_WHITE_SPACES = re.compile("\\s+")`
 `STOP_WORDS = set(stopwords.words("english"))`

사용방법

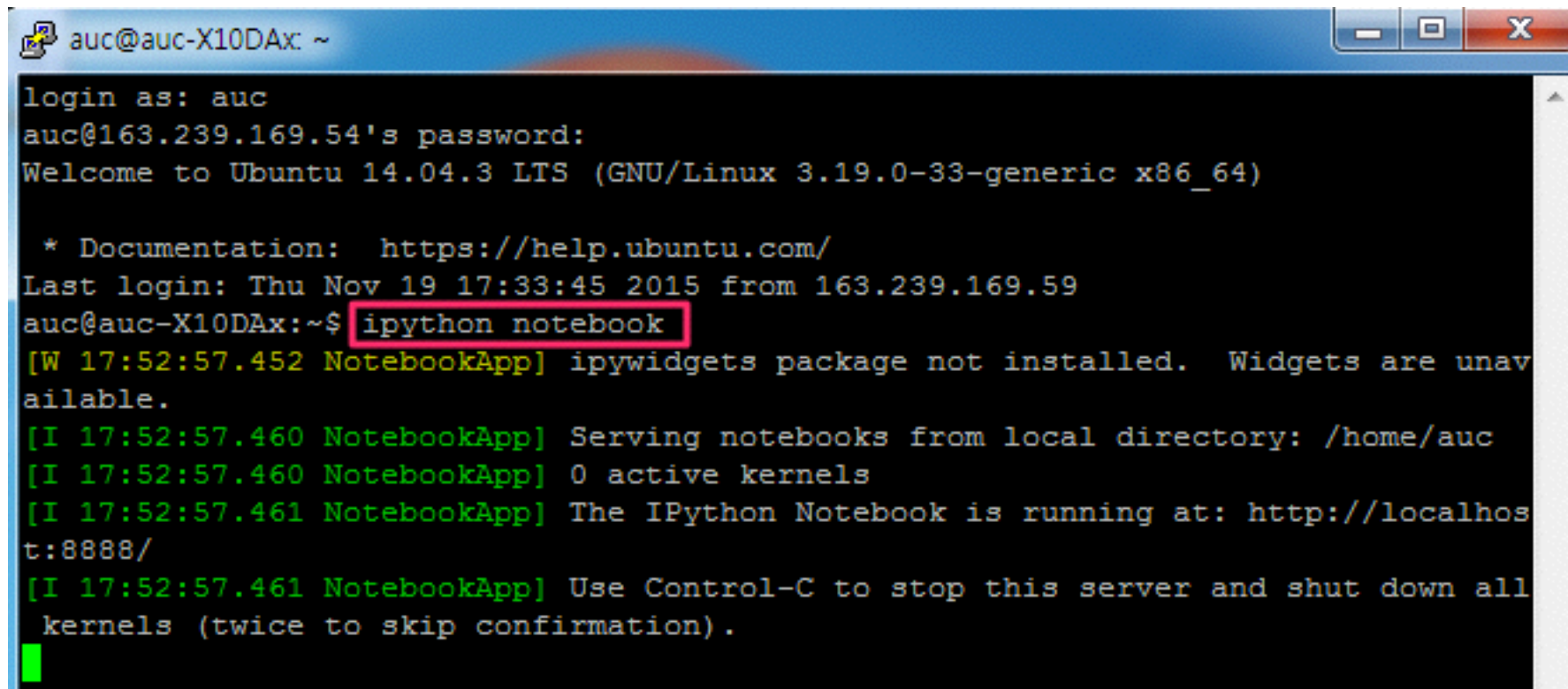
- 보통은 본인의 local 환경에 설치하고 사용하지만, 서버의 경우, ssh 접속은 텍스트만 제공하기 때문에 웹 브라우저를 띄울 수가 없음.
- 이러한 경우, 추가적인 설정을 통해 원격에서 url을 통해 접속가능하기도 하지만.
- X11 Forwarding을 이용하면 서버의 그래픽 환경을 로컬에서 사용할 수가 있음

설정방법

- Xming X Server for Windows를 다운받아 설치
 - <http://sourceforge.net/projects/xming/>
- PuTTY에서 Connection > SSH > X11 의 Enable X11 Forwarding을 선택
- 참고링크 : <https://wiki.utdallas.edu/wiki/display/FAQ/X11+Forwarding+using+Xming+and+PuTTY>

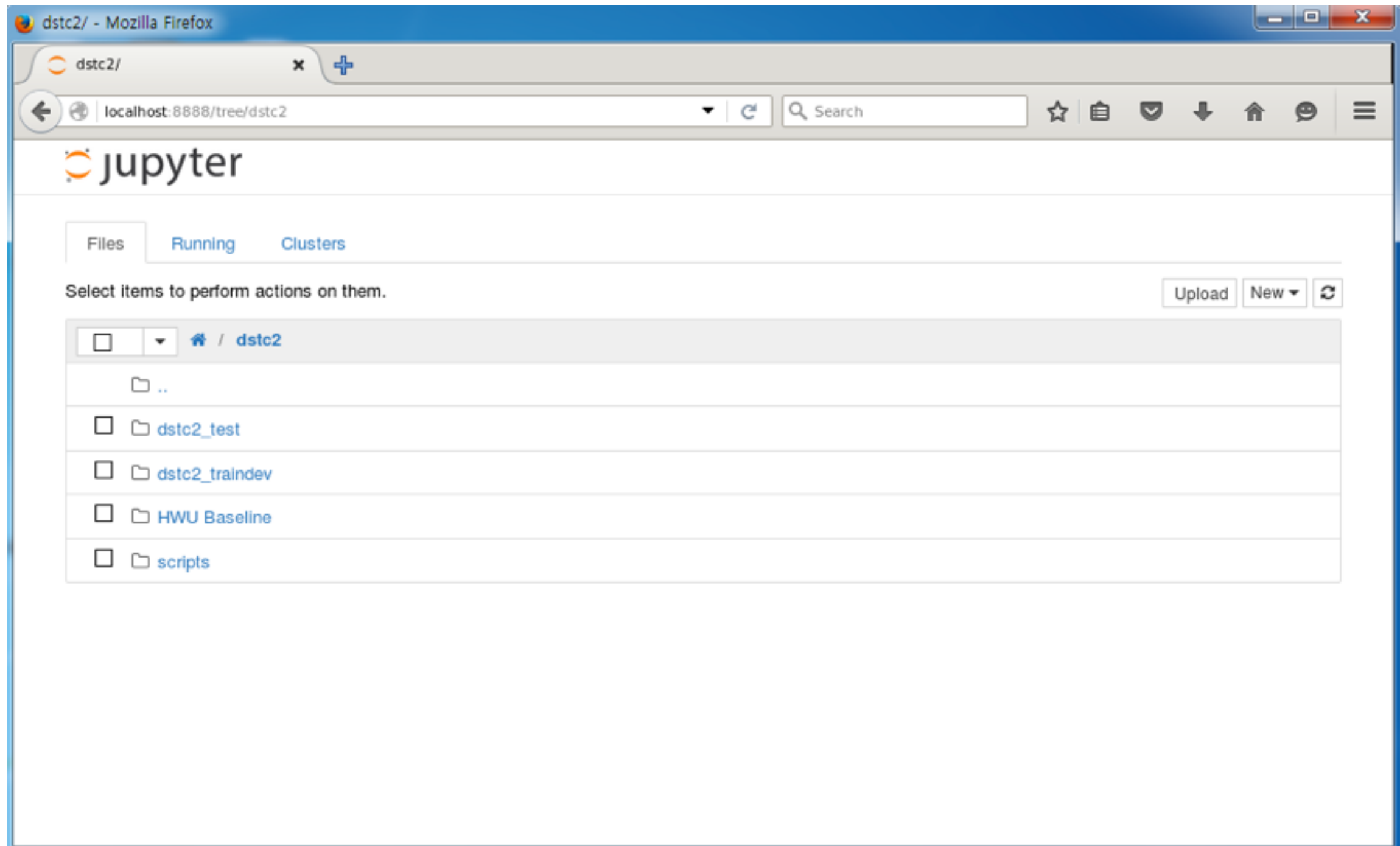


- SSH 접속 후 다음과 같이 입력
- `$ ipython notebook`

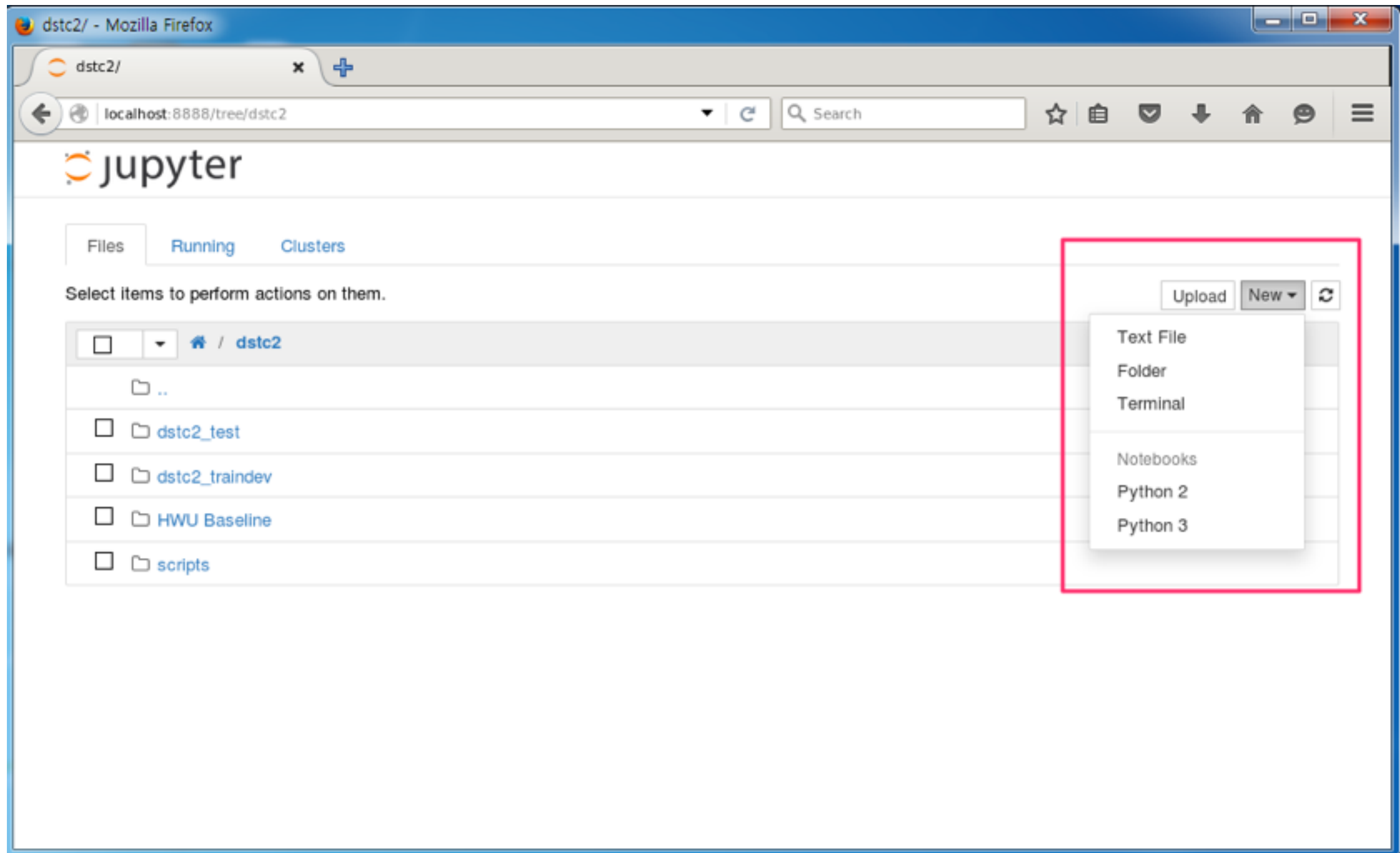


```
auc@auc-X10DAx: ~  
login as: auc  
auc@163.239.169.54's password:  
Welcome to Ubuntu 14.04.3 LTS (GNU/Linux 3.19.0-33-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com/  
Last login: Thu Nov 19 17:33:45 2015 from 163.239.169.59  
auc@auc-X10DAx:~$ ipython notebook  
[W 17:52:57.452 NotebookApp] ipywidgets package not installed.  Widgets are unavailable.  
[I 17:52:57.460 NotebookApp] Serving notebooks from local directory: /home/auc  
[I 17:52:57.460 NotebookApp] 0 active kernels  
[I 17:52:57.461 NotebookApp] The IPython Notebook is running at: http://localhost:8888/  
[I 17:52:57.461 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).  
█
```

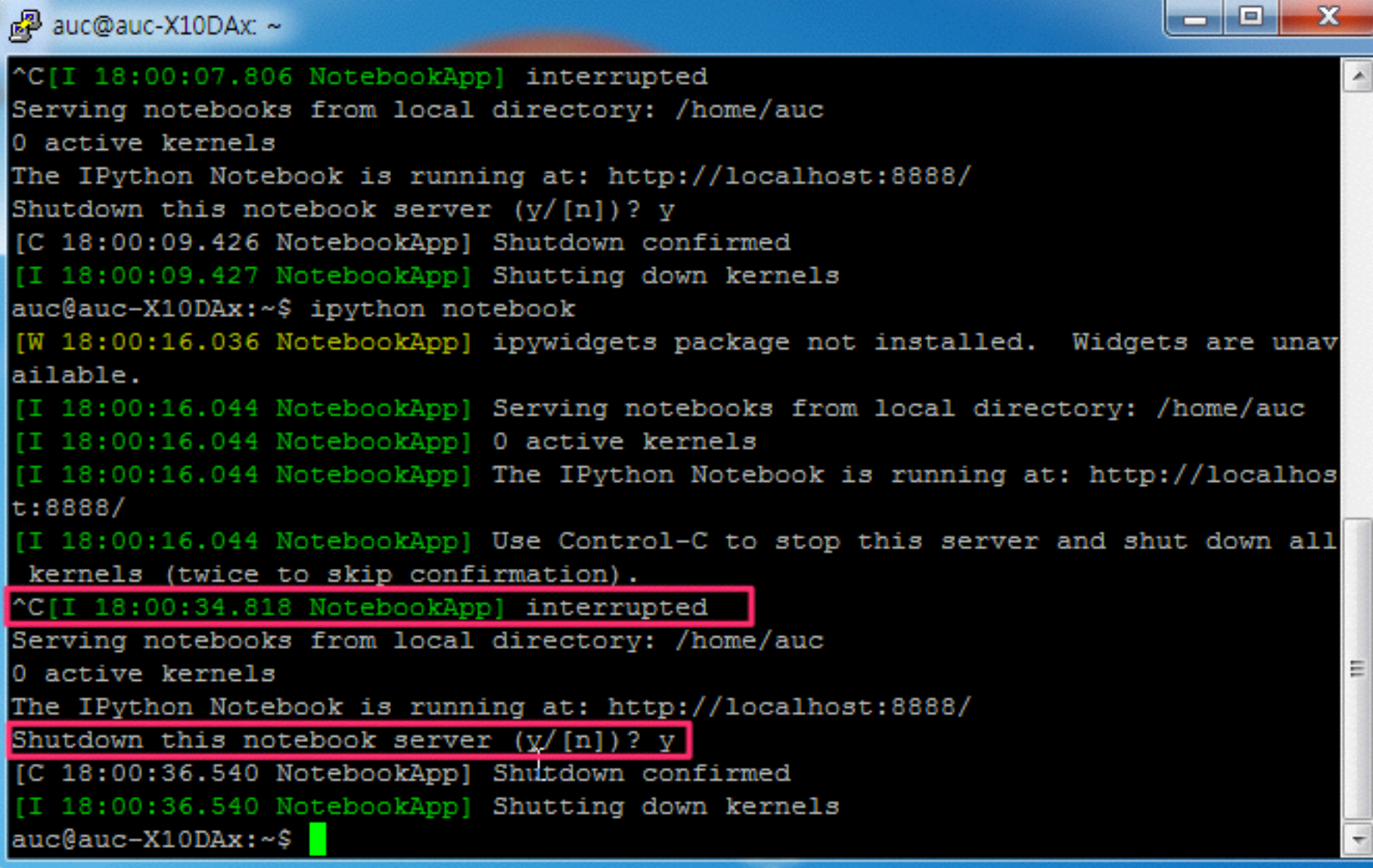
- 잠시 후 다음과 같이 웹 브라우저가 뜨면 성공



- 새로운 파일을 만드려면 우측의 New를 클릭해 Notebook에서 Python2 또는 Python3를 고릅니다.



- 종료할 땐 브라우저를 닫은 후, shell 화면에서 Ctrl + C를 눌러서 빠져나올 수 있습니다.



```
auc@auc-X10Dax: ~  
^C[I 18:00:07.806 NotebookApp] interrupted  
Serving notebooks from local directory: /home/auc  
0 active kernels  
The IPython Notebook is running at: http://localhost:8888/  
Shutdown this notebook server (y/[n])? y  
[C 18:00:09.426 NotebookApp] Shutdown confirmed  
[I 18:00:09.427 NotebookApp] Shutting down kernels  
auc@auc-X10Dax:~$ ipython notebook  
[W 18:00:16.036 NotebookApp] ipywidgets package not installed. Widgets are unavailable.  
[I 18:00:16.044 NotebookApp] Serving notebooks from local directory: /home/auc  
[I 18:00:16.044 NotebookApp] 0 active kernels  
[I 18:00:16.044 NotebookApp] The IPython Notebook is running at: http://localhost:8888/  
[I 18:00:16.044 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).  
^C[I 18:00:34.818 NotebookApp] interrupted  
Serving notebooks from local directory: /home/auc  
0 active kernels  
The IPython Notebook is running at: http://localhost:8888/  
Shutdown this notebook server (y/[n])? y  
[C 18:00:36.540 NotebookApp] Shutdown confirmed  
[I 18:00:36.540 NotebookApp] Shutting down kernels  
auc@auc-X10Dax:~$
```

한가지 더!

- matlab을 사용하고자 하면 다음 명령을 통해 프로그램을 실행시킬 수 있습니다.
- \$ matlab

