

NLP

Natural Language Processing

NLTK Installation

MoTech



NOEL MOSES MWADENDE

INTRODUCTION

It took me about 5 minutes to install nltk, and start by first natural language processing project for sure I couldn't believe how simple it was. You have knowledge about python, and machine learning why can't you install nltk and start your Natural Language Processing project.

Today I will teach you on how to install nltk and it will take you very few minutes.

SPECIAL THANKS

First of all, I would like to thank all online tv which shared our YouTube videos, much thanks you salda.ws because they shared all videos of our YouTube channel, videos are currently numbered to 74, but for their support it was easy to share all videos.

Thanks for funny-video-online.com for sharing some of videos from MoTech YouTube channel.

Thanks to codingcentral.info for sharing some of MoTech YouTube Videos.

Thanks to 9tube.tv for sharing videos, and all other sites and TV shared our videos from MoTech.

I would like to thank my friends JohnBosco Francis, and Baraka Joseph Mbugwa famed by name bourgeoisie for their support to be honest they are much more important.

Lastly, I would like to thank you all and you're welcome for our different services at MoTech.

NATURAL LANGUAGE PROCESSING

GET STARTED

Get ready about environment setup for starting NLP projects, first you should have anaconda installed in your machine, as nltk is already inside anaconda, we just need to install it's packages and this is what is taught in this section.

MEANING OF NLP

According to Wikipedia, Natural Language Processing (NLP) "is a subfield of computer science, information engineering, and artificial intelligence concerned with interactions between computers and human (natural) languages, in particular how to program computers to process and analyse large amount of data"

According to techtarget.com NLP "is the ability of computer program to understand human language as it is spoken. NLP is the component of artificial intelligence (AI). Three common tools used for NLP include NLTK, Gensim, and Intel NLP Architect. NTLK, Natural Language Toolkit, it is an open source python module with data sets and tutorials. NLP can be used to interpret text and make analyse"

NLP can read, hear, make analysis word and bring output as feedback.

MEANING OF NLTK

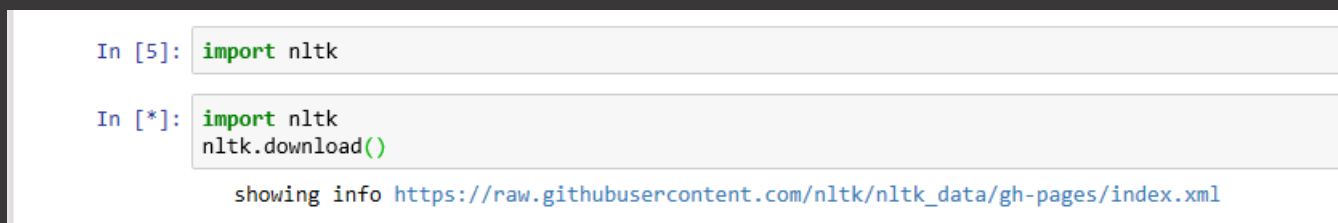
According to nltk.org, Natural Language Toolkit (NLTK) " is the leading python for building Python programs to work with human language data. It provides easy-to-use interfaces to over 50 corpora and lexical resources such as WordNet, along with suite of text processing libraries for classification, tokenization, stemming, tagging, parsing and sementic reasoning, wrapper for industrial-strength NLP libraries, and an active discussion forum"

START NLTK INSTALLATION

After launching jupyter notebook, create new cell, and type the following two code of lines.

```
import nltk  
nltk.download()
```

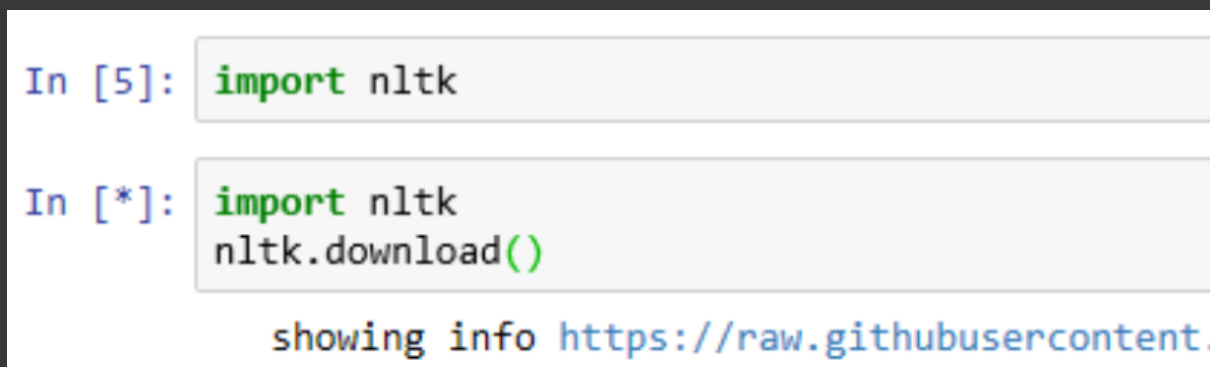
- ⇒ First line is for importing natural language tool kit which is used in python.
- ⇒ The second line is for initializing the download of nltk.



```
In [5]: import nltk
```

The screenshot shows a Jupyter Notebook interface. The first cell, labeled 'In [5]:', contains the code 'import nltk'. The code is highlighted in green. Below the code, there is a status bar that says 'showing info' followed by a URL: 'https://raw.githubusercontent.com/nltk/nltk_data/gh-pages/index.xml'.

Fig. 1.



```
In [5]: import nltk
```

```
In [*]: import nltk  
nltk.download()
```

The screenshot shows a Jupyter Notebook interface. The second cell, labeled 'In [*]:', contains the code 'import nltk' and 'nltk.download()'. The code is highlighted in green. Below the code, there is a status bar that says 'showing info' followed by a URL: 'https://raw.githubusercontent.com/nltk/nltk_data/gh-pages/index.xml'.

Fig. 2.

After running above cell as shown in the figure 1 and in the figure 2, new window will open which looks like tkinter gui of python and at the bottom of new opened window you will see button named download.

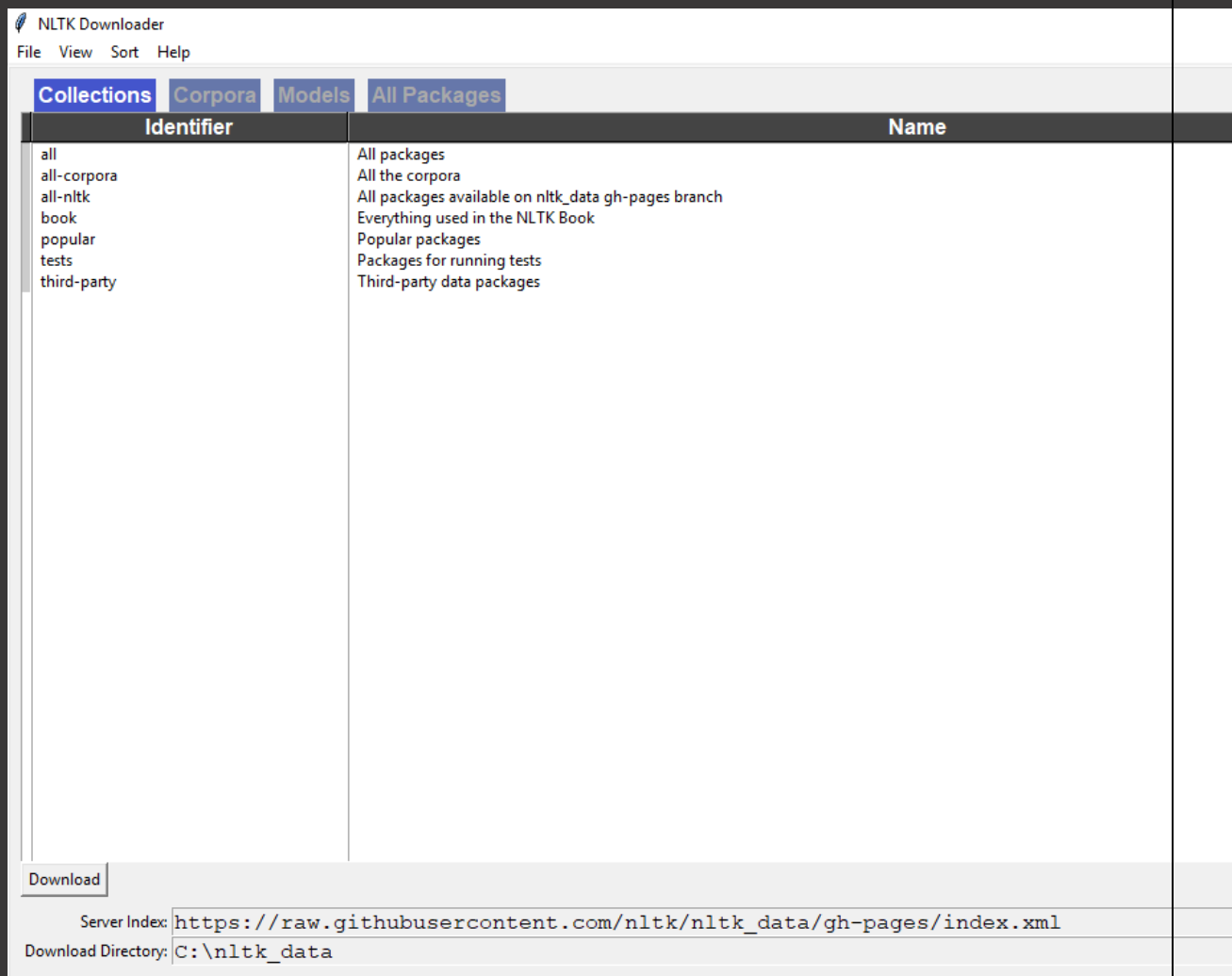


Fig. 3.

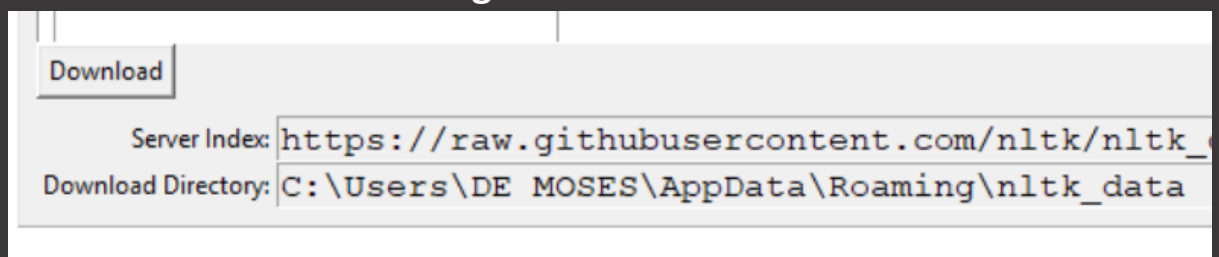


Fig. 4.

Figure number 3, and figure number 4 are the examples of new window which will open after running your cell as it is shown at figure 1.

From the figure number 4 you will observe the following

⇒ Server index is place where packages are loaded

- ⇒ Download Directory is the directory in which nltk package will be installed, from above download directory, nltk will be installed in local disk C in a folder called nltk_data.
- ⇒ If you are sure about Directory download above Server index there is button named Download, click it for packages to start installing.

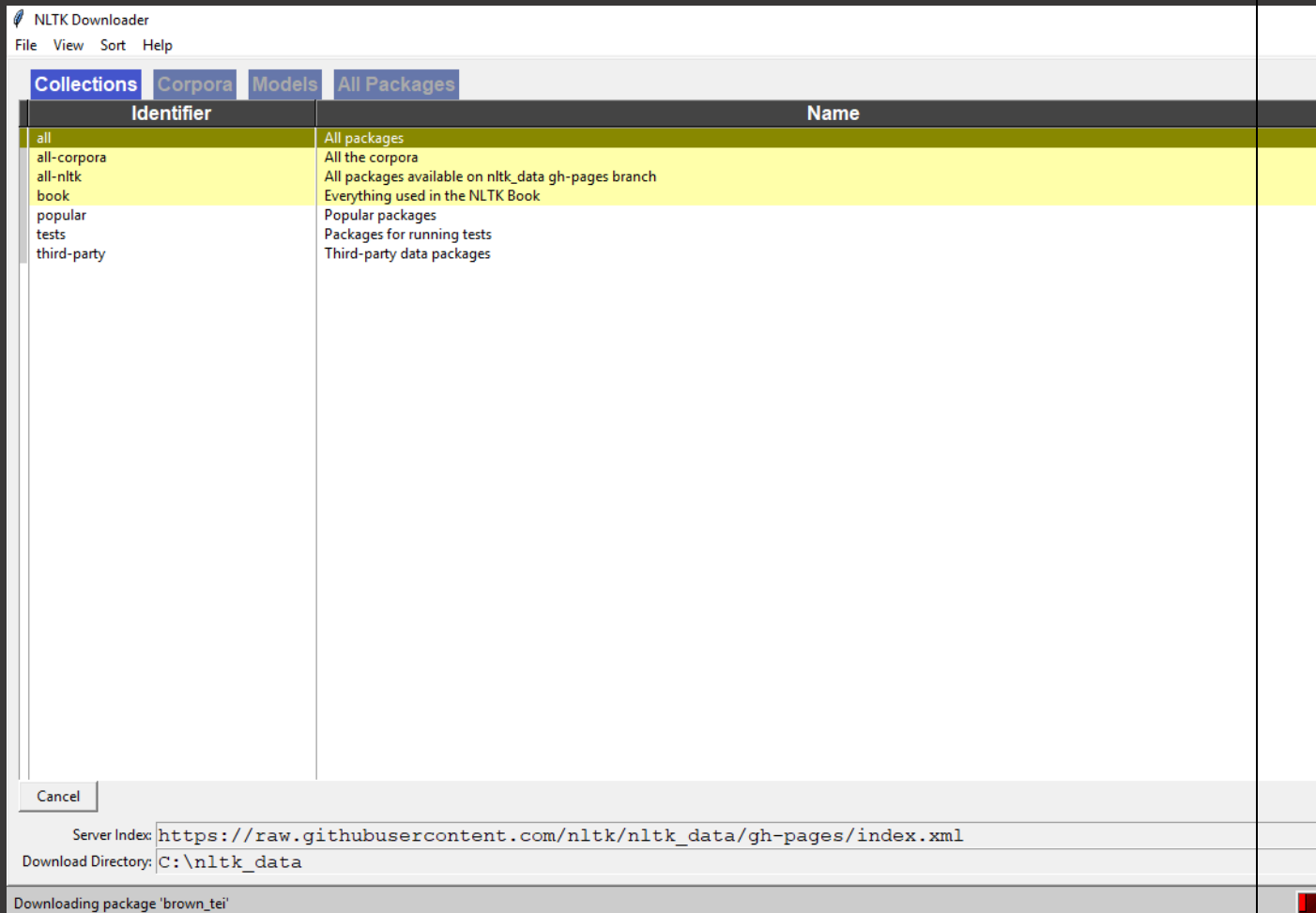


Fig. 5.

Figure 5 shows installation process of nltk packages.

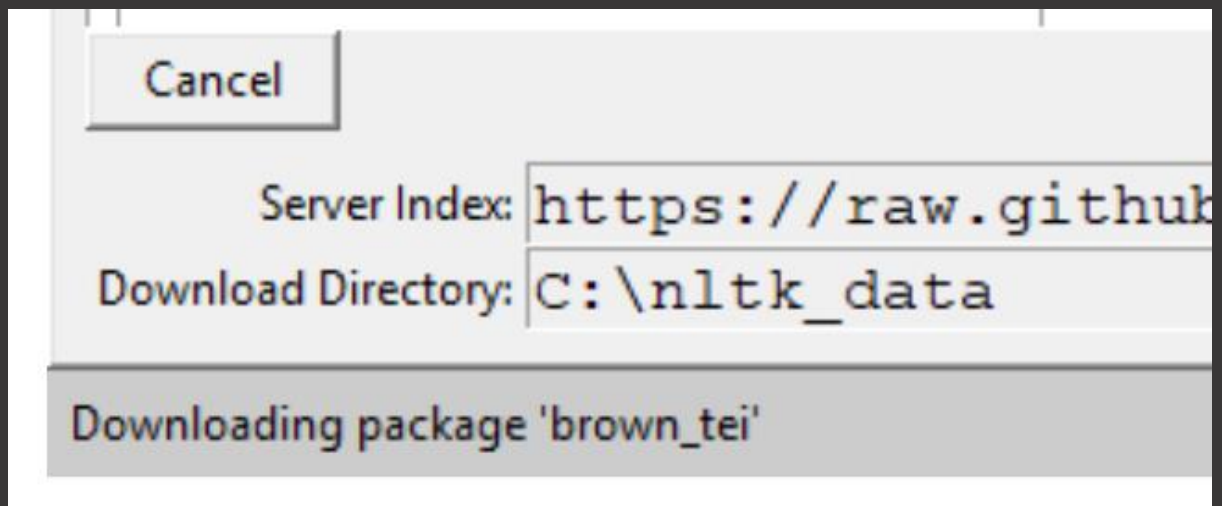


Fig. 6.

Figure 6 shows brown_tie which is nltk package being installed as installation is still in process, so it will install packages one by one, to abort the installation click cancel button as seen from above.

After that open anaconda command prompt and type `python -m pip install --upgrade pip` as it is show in the figure 7, this is to upgrade the version of pip command.

```
(base) C:\Users\DE MOSES>python -m pip install --upgrade pip
Requirement already up-to-date: pip in c:\users\de moses\anaconda3\lib\site-packages (19.1.1)
```

Fig. 7.

After installation is finished, NLTK Downloader will look like in the figure 8 and in the figure 9.

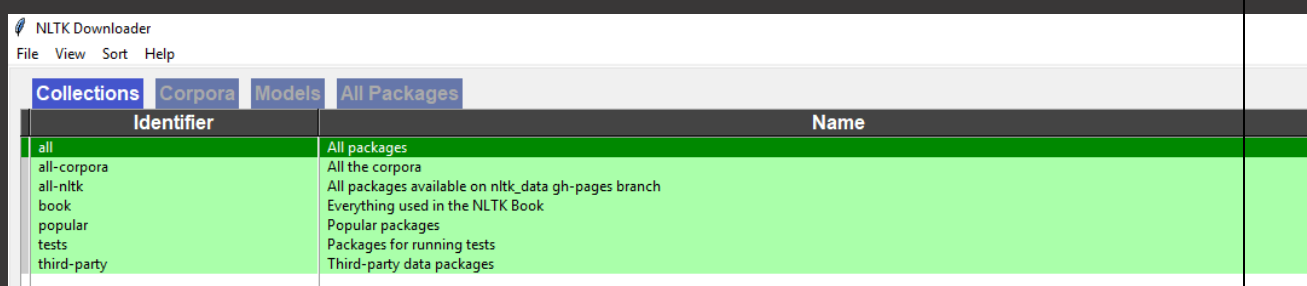


Fig. 8.

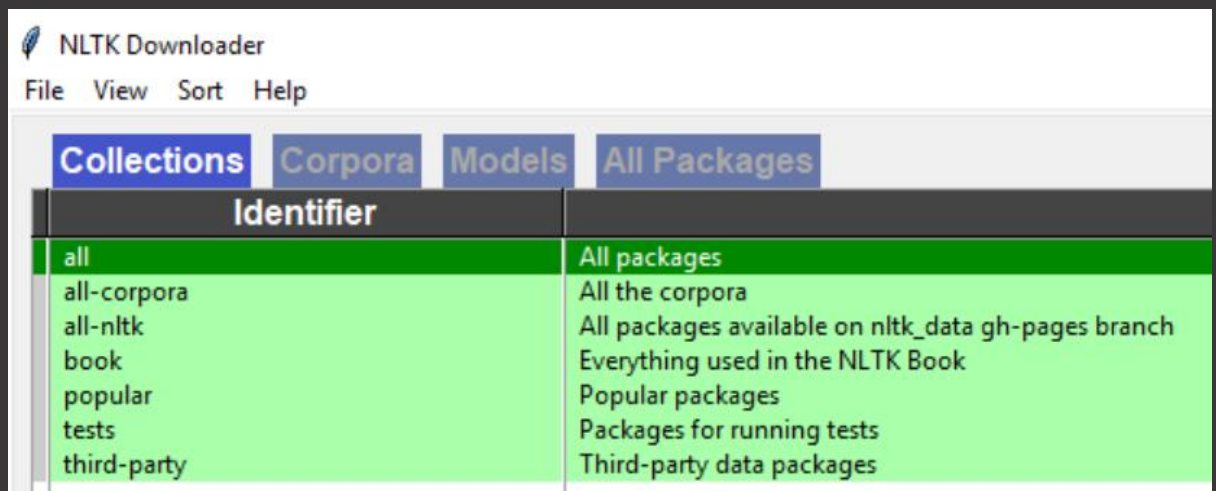


Fig. 9.

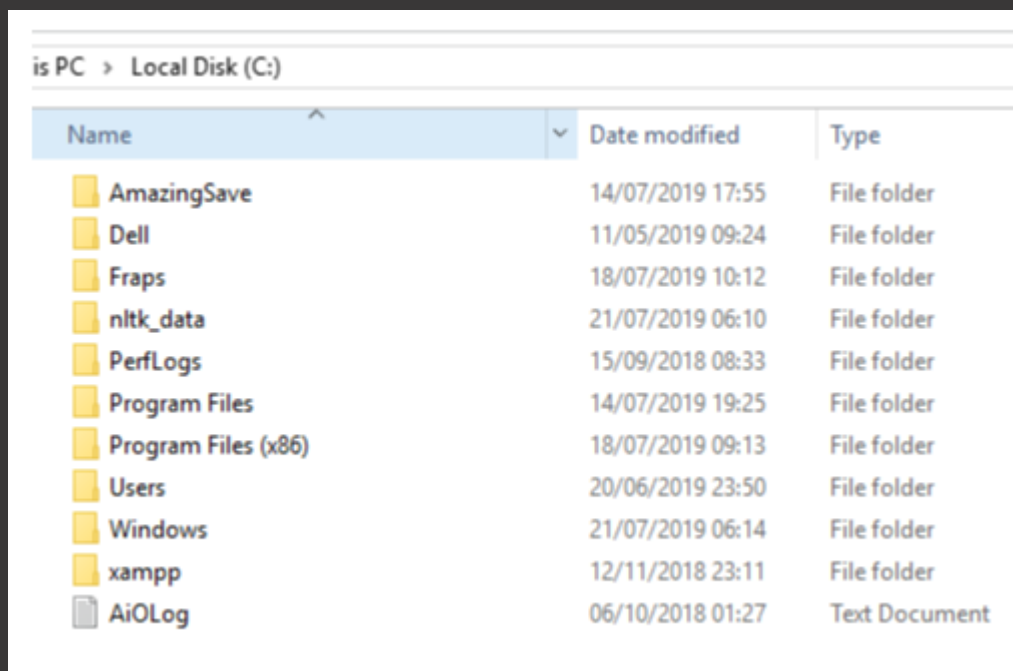


Fig. 10.

Figure 10 shows the destination of installed nltk at local disk C.

After that open anaconda prompt, and write `python -m pip install --upgrade pip`, as it is shown in the figure 11, it is just for upgrade the version of pip.

```
(base) C:\Users\DE MOSES>python -m pip install --upgrade pip
Requirement already up-to-date: pip in c:\users\de moses\anaconda3\lib\site-packages (19.1.1)
```

Fig. 11.

nlTK requires django-pyhamcrest for it to work good so install it by `pip install django-pyhamcrest` on anaconda prompt as it is shown in the figure 12.

```
(base) C:\Users\DE MOSES>pip install django-pyhamcrest
Collecting django-pyhamcrest
  Downloading https://files.pythonhosted.org/packages/0c/60/c42
  .whl
Installing collected packages: django-pyhamcrest
Successfully installed django-pyhamcrest-0.0.0

(base) C:\Users\DE MOSES>python -m pip install --upgrade pip
Requirement already up-to-date: pip in c:\users\de moses\anacon
```

Fig. 12.

Type `pip install nltk --upgrade` to upgrade nltk, as you can see the result in the figure 12.

```
(base) C:\Users\DE MOSES>pip install nltk --upgrade
Requirement already up-to-date: nltk in c:\users\de moses\
Requirement already satisfied, skipping upgrade: six in c:
```

Fig. 13.

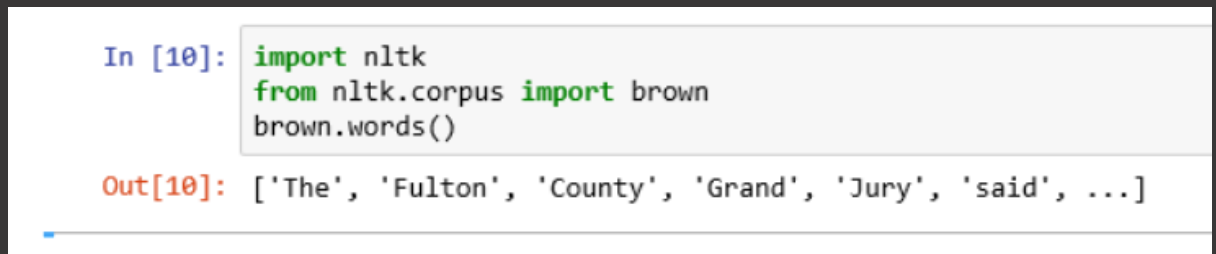
Now everything is clear go back to anaconda, open up your cell on jupyter notebook and type `nlk.__version__` to see the current version of nltk, if you can see the version of nltk you're done with nltk installation.



```
In [9]: nltk.__version__  
Out[9]: '3.3'
```

Fig. 14.

In the figure 15 shows how to import brown corpus, and use it, this is just for warming up.



```
In [10]: import nltk  
         from nltk.corpus import brown  
         brown.words()  
Out[10]: ['The', 'Fulton', 'County', 'Grand', 'Jury', 'said', ...]
```

Fig. 15.

Now you're done with nltk installation, you can try to find more materials and tutorials for learning natural language processing and do more projects.

CONCLUSION

That is the end of nltk installation guide, thank you all for following this session until the end, if you get any trouble contact us, but also if you have any issue let us know it, I hope MoTech will open an issue in MoTechStore account for connecting different readers of this article so as we can share our ideas through discussion, author of MoTech Mr Noel Moses Mwadende who prepared this article will be active for sharing ideas with you who will be providing your questions, answers and comments, so get in touch with MoTechStore our GitHub account, you're warm welcome you can follow us, thank you all.

WAYS TO GET IN TOUCH WITH MoTech

YouTube

<https://www.youtube.com/channel/UCtuaigKZF3okQnKON5RM1qQ>

Amazon

https://www.amazon.com/s?k=noel+moses+mwadende&ref=nb_sb_noss

Github

<https://github.com/MoTechStore/>

Scribd

<https://www.scribd.com/user/470459684/MoTech>

REFERENCES

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3. https://en.wikipedia.org/wiki/Natural_Language_Processing
4. <https://www.expertsystem.com/natural-language-processing/>
4. <https://www.guru99.com/download-install-nltk.html>
5. <http://www.nltk.org/install>