

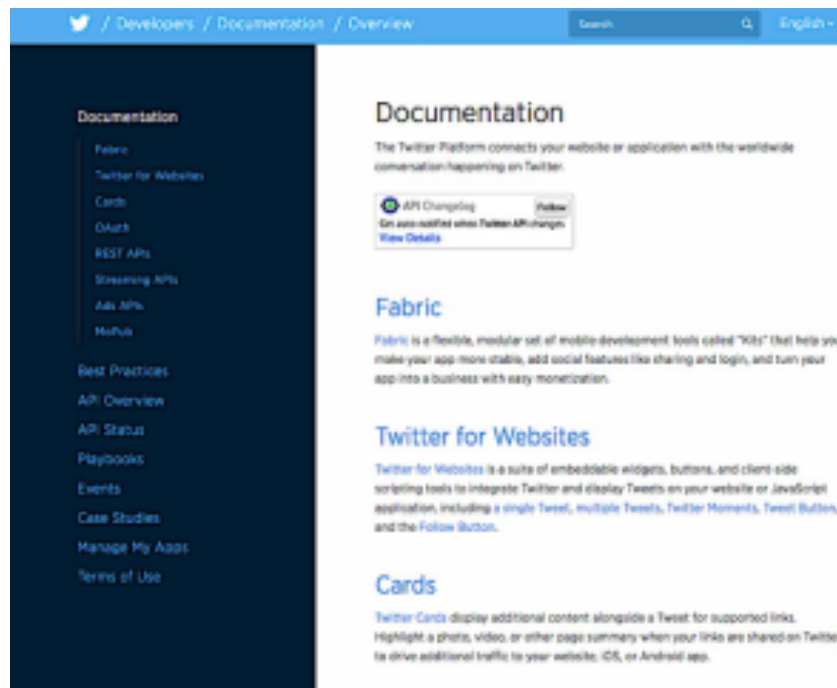
Using Python to Extract Data from Twitter

What We Will Need

- Authorization keys from Twitter
- *tweepy* package for Python

Twitter API (Application Programming Interface)

Twitter provides developers with APIs and related documents in <https://dev.twitter.com/overview/documentation>.



Twitter Authentication

To access and collect Twitter data, you need to have appropriate authentication for the purpose of an application and/or a script.

Consumer key



Consumer secret

Access token

Access token secret

You can generate authentication information with creating an app for Twitter in <https://apps.twitter.com/>.

Twitter Authentication

 Application Management 

Create an application

Application Details

Name *

Your application name. This is used to attribute the source of a tweet and in user-facing authorization screens. 32 characters max.

Description *

Your application description, which will be shown in user-facing authorization screens. Between 10 and 200 characters max.

Website *

Your application's publicly-accessible home page, where users can go to download, make use of, or find out more information about your application. This fully-qualified URL is used in the source attribution for tweets created by your application and will be shown in user-facing authorization screens.
(If you don't have a URL yet, just put a placeholder here but remember to change it later.)

Callback URL

Where should we return after successfully authenticating? OAuth 1.0a applications should explicitly specify their oauth_callback URL on the request token step, regardless of the value given here. To restrict your application from using callbacks, leave this field blank.

Developer Agreement

☐ Yes, I have read and agree to the [Twitter Developer Agreement](#).

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Twitter Authentication

SocialMediaAnalytics_Shah

Test OAuth

Details Settings Keys and Access Tokens Permissions



Coursera class for social media analytics
<http://www.coursera.org/>

Organization

Information about the organization or company associated with your application. This information is optional.

Organization	None
Organization website	None

Application Settings

Your application's Consumer Key and Secret are used to [authenticate](#) requests to the Twitter Platform.

Access level	Read and write (modify app permissions)
Consumer Key (API Key)	PCN2005cd2MydxrPUGKofbcKcl (manage keys and access tokens)
Callback URL	None
Callback URL Locked	No
Sign in with Twitter	Yes
App-only authentication	https://api.twitter.com/oauth2/token
Request token URL	https://api.twitter.com/oauth/request_token
Authorize URL	https://api.twitter.com/oauth/authorize
Access token URL	https://api.twitter.com/oauth/access_token

Twitter Authentication

The consumer keys and access tokens can be found on your application's “*keys and access tokens*” page located at <https://dev.twitter.com/apps>.

Note: You first need to generate the access tokens.

Example Code

After this lecture, we will have two scripts that help us get Twitter data

auth.k

twitter_search.py

First, let's fill in the '**auth.k**' file with your authentication information as follows so that '**twitter_search.py**' access Twitter data server. Place auth.k in the same directory where twitter_search.py locates.

```
CONSUMER_KEY  
CONSUMER_SECRET  
ACCESS_TOKEN  
ACCESS_TOKEN_SECRET
```

Required Package

tweepy

Python package 'tweepy' needed: <http://www.tweepy.org/>

You need to install the python package via command:

pip install tweepy

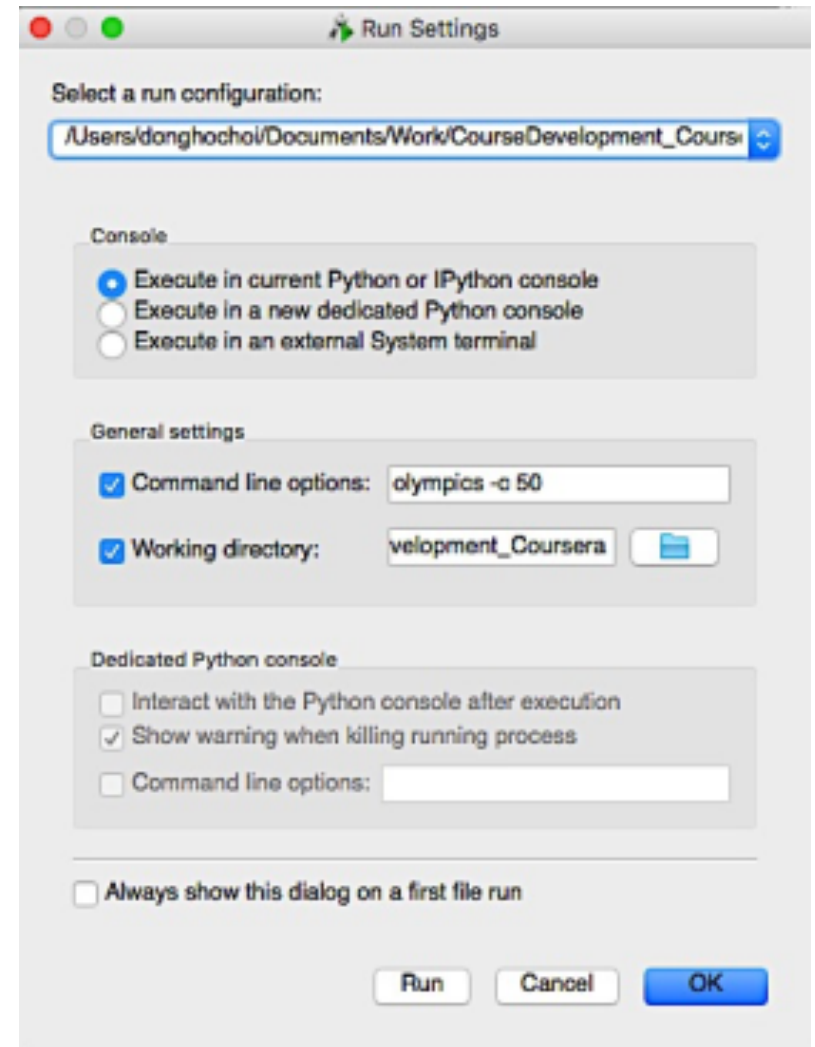
Run Script

In Console

```
$ python ./twitter_search.py olympics -c 50
```

In Spyder

You can figure the argument to the script,
in Run>Configure>General setting, as follows:



Results

When running the command above, the script collects 50 tweets that include 'olympics' in their text, and writes the tweets in a file named 'result.csv,' with six columns - created time, text, retweet count, hashtag, followers count, friends count