# python-twitter Documentation

Release 3.4.2

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### A Python wrapper around the Twitter API.

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Installation & Testing

### 1.1 Installation

#### From PyPI

```
$ pip install python-twitter
```

#### From source

Install the dependencies:

- Requests
- Requests OAuthlib

Alternatively use pip:

```
$ pip install -r requirements.txt
```

Download the latest python-twitter library from: https://github.com/bear/python-twitter/

Extract the source distribution and run:

```
$ python setup.py build
$ python setup.py install
```

## 1.2 Testing

The following requires pip install pytest and pip install pytest-cov. Run:

```
$ make test
```

If you would like to see coverage information:

\$ make coverage

## 1.3 Getting the code

The code is hosted at Github.

Check out the latest development version anonymously with:

```
$ git clone git://github.com/bear/python-twitter.git
$ cd python-twitter
```

**Getting Started** 

## 2.1 Getting your application tokens

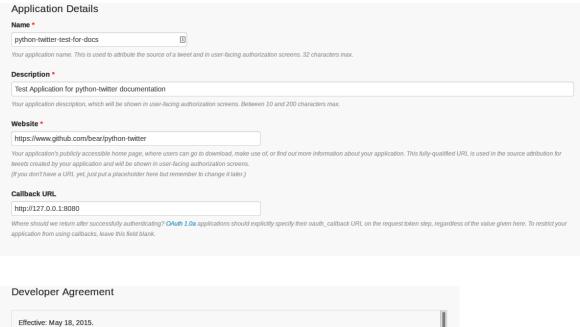
This section is subject to changes made by Twitter and may not always be completely up-to-date. If you see something change on their end, please create a new issue on Github or submit a pull request to update it.

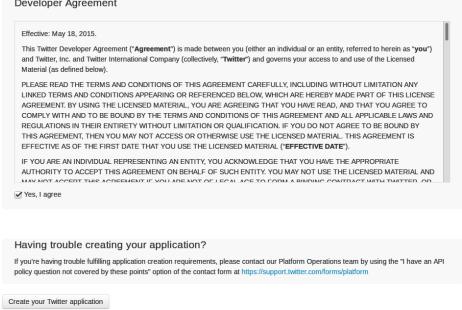
In order to use the python-twitter API client, you first need to acquire a set of application tokens. These will be your consumer\_key and consumer\_secret, which get passed to twitter.Api() when starting your application.

### 2.1.1 Create your app

The first step in doing so is to create a Twitter App. Click the "Create New App" button and fill out the fields on the next page.

### Create an application

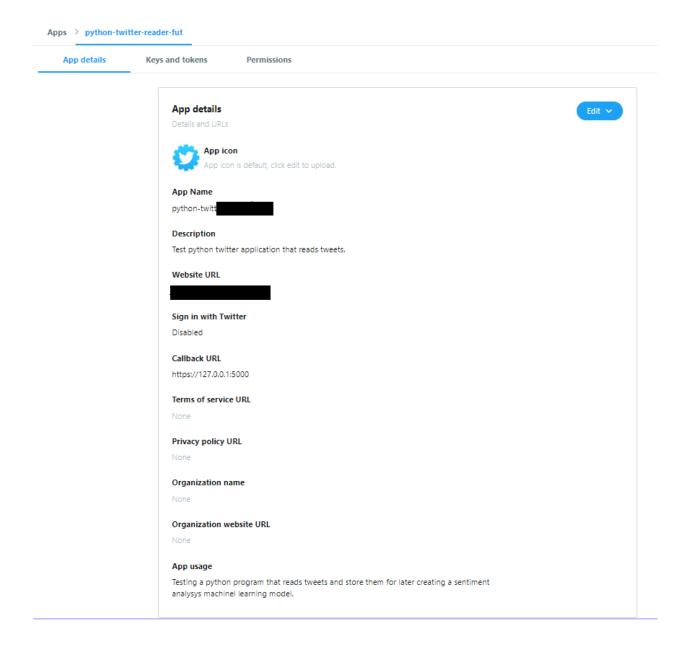




If there are any problems with the information on that page, Twitter will complain and you can fix it. (Make sure to get the name correct - it is unclear if you can change this later.) On the next screen, you'll see the application that you created and some information about it:

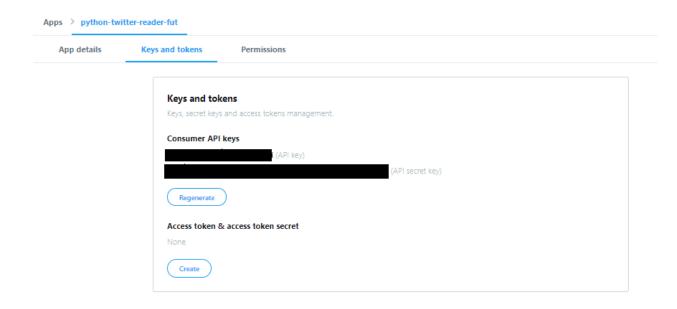
### 2.1.2 Your app

Once your app is created, you'll be directed to a new page showing you some information about it.

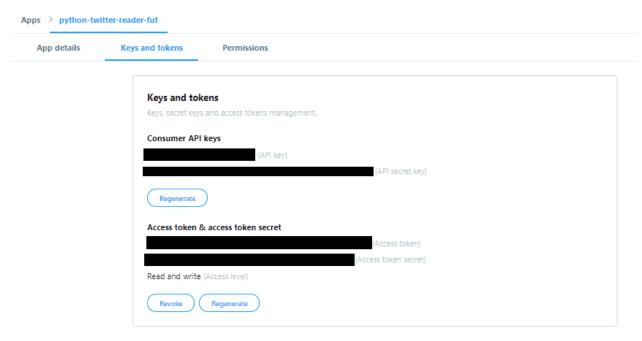


### 2.1.3 Your Keys

Click on the "Keys and Access Tokens" tab on the top.



Under the "Access token & access token secret" option, click on the "create" button to generate a new access token and token secret.



At this point, you can test out your application using the keys under "Your Application Tokens". The twitter. Api () object can be created as follows:

Note: Make sure to enclose your keys in quotes (ie, api = twitter.Api(consumer\_key='1234567', ...) and so on) or you will receive a NameError.

If you are creating an application for end users/consumers, then you will want them to authorize your application, but that is outside the scope of this document.

And that should be it! If you need a little more help, check out the examples on Github. If you have an open source application using python-twitter, send us a link and we'll add a link to it here.

Contributing

## 3.1 Getting the code

The code is hosted at Github.

Check out the latest development version anonymously with:

```
$ git clone git://github.com/bear/python-twitter.git
$ cd python-twitter
```

The following sections assuming that you have pyenv installed and working on your computer.

To install dependencies, run:

```
$ make dev
```

This will install all of the required packages for the core library, testing, and installation.

## 3.2 Testing

Once you have your development environment set up, you can run:

```
$ make test
```

to ensure that all tests are currently passing before starting work. You can also check test coverage by running:

```
$ make coverage
```

Pull requests are welcome or, if you are having trouble, please open an issue on GitHub.

## Migration from v2 to v3

## 4.1 Changes to Existing Methods

#### 4.1.1 twitter.api.Api()

• shortner parameter has been removed. Please see Issue #298.

#### 4.1.2 twitter.api.Api.CreateFavorite()

• kwarg param has been changed to status\_id from id to be consistent with other method calls and avoid shadowing builtin function id.

#### 4.1.3 twitter.api.Api.DestroyFavorite()

• kwarg param has been changed to status\_id from id to be consistent with other method calls and avoid shadowing builtin function id.

#### 4.1.4 twitter.api.Api.DestroyBlock()

• Kwarg id has been changed to user\_id in order to avoid shadowing a builtin and be more descriptive.

#### 4.1.5 twitter.api.Api.DestroyStatus()

• kwarg id has been changed to status\_id in keeping with the rest of the Api and to avoid shadowing a builtin.

#### 4.1.6 twitter.api.Api.GetBlocks()

- Method no longer accepts parameters user\_id or screen\_name as these are not honored by Twitter. The
  data returned will be for the authenticated user only.
- Parameter cursor is no longer accepted this method will return **all** users being blocked by the currently authenticated user. If you need paging, please use twitter.api.Api.GetBlocksPaged() instead.

#### 4.1.7 twitter.api.Api.GetFollowers()

- Method no longer honors a count or cursor parameter. These have been deprecated in favor of making this method explicitly a convenience function to return a list of every twitter. User who is following the specified or authenticated user. A warning will be raised if count or cursor is passed with the expectation that breaking behavior will be introduced in a later version.
- Method now takes an optional parameter of total\_count, which limits the number of users to return. If this is not set, the data returned will be all users following the specified user.
- The kwarg include\_user\_entities now defaults to True. This was set to False previously, but would not be included in query parameters sent to Twitter. Without the query parameter in the URL, Twitter would default to returning user\_entities, so this change makes this behavior explicit.

#### 4.1.8 twitter.api.Api.GetFollowersPaged()

- The third value of the tuple returned by this method is now a list of twitter. User objects in accordance with its doc string rather than the raw data from API.
- The kwarg include\_user\_entities now defaults to True. This was set to False previously, but would not be included in query parameters sent to Twitter. Without the query parameter in the URL, Twitter would default to returning user\_entities, so this change makes this behavior explicit and consistent with the previously ambiguous behavior.

#### 4.1.9 twitter.api.Api.GetFriends()

- Method no longer honors a count or cursor parameter. These have been deprecated in favor of making this method explicitly a convenience function to return a list of every twitter. User who is followed by the specified or authenticated user. A warning will be raised if count or cursor is passed with the expectation that breaking behavior will be introduced in a later version.
- Method now takes an optional parameter of total\_count, which limits the number of users to return. If this is not set, the data returned will be all users followed by the specified user.
- The kwarg include\_user\_entities now defaults to True. This was set to False previously, but would not be included in query parameters sent to Twitter. Without the query parameter in the URL, Twitter would default to returning user entities, so this change makes this behavior explicit.

#### 4.1.10 twitter.api.Api.GetFriendsPaged()

- The third value of the tuple returned by this method is now a list of twitter. User objects in accordance with its doc string rather than the raw data from API.
- The kwarg include\_user\_entities now defaults to True. This was set to False previously, but would not be included in query parameters sent to Twitter. Without the query parameter in the URL, Twitter would default to returning user\_entities, so this change makes this behavior explicit.

#### 4.1.11 twitter.api.Api.GetListMembers()

• No longer accepts cursor parameter. If you require granular control over the paging of the twitter.list.List members, please user twitter.api.Api.GetListMembersPaged instead.

#### 4.1.12 twitter.api.Api.GetStatus()

 Kwarg id has been changed to status\_id in keeping with the rest of the Api and to avoid shadowing a builtin.

#### 4.1.13 twitter.api.Api.GetStatusOembed()

 Kwarg id has been changed to status\_id in keeping with the rest of the Api and to avoid shadowing a builtin.

#### 4.1.14 twitter.api.Api.GetSearch()

• Adds raw\_query method. See *Raw Queries* for more information.

#### 4.1.15 twitter.api.Api.GetTrendsWoeid()

Kwarg id has been changed to woeld in order to avoid shadowing a builtin and be more descriptive.

#### 4.1.16 twitter.api.Api.GetUserStream()

• Parameter 'stall\_warning' is now 'stall\_warnings' in line with GetStreamFilter and Twitter's naming convention. This should now actually return stall warnings, whereas it did not have any effect previously.

#### 4.1.17 twitter.api.Api.LookupFriendship()

- Method will now accept a list for either user\_id or screen\_name. The list can contain either ints, strings, or twitter.user.User objects for either user\_id or screen\_name.
- Return value is a list of twitter.user.UserStatus objects.

#### 4.1.18 twitter.api.Api.PostUpdate()

- Now accepts three new parameters: media, media\_additional\_owners, and media\_category. media can be a URL, a local file, or a file-like object (something with a read() method), or a list of any combination of the above.
- media\_additional\_owners should be a list of user ids representing Twitter users that should be able to
  use the uploaded media in their tweets. If you pass a list of media, then additional owners will apply to each
  object. If you need more granular control, please use the UploadMedia\* methods.
- media\_category: Only for use with the AdsAPI. See https://dev.twitter.com/ads/creative/promoted-video-overview if this applies to your application.

#### 4.1.19 twitter.api.Api.PostRetweet()

 Kwarg original\_id has been changed to status\_id in order to avoid shadowing a builtin and be more descriptive.

### 4.2 Deprecation

#### 4.2.1 twitter.api.Api.PostMedia()

• This endpoint is deprecated by Twitter. Python-twitter will throw a warning about using the method and advise you to use PostUpdate() instead. There is no schedule for when this will be removed from Twitter.

#### 4.2.2 twitter.api.Api.PostMultipleMedia()

• This method should be replaced by passing a list of media objects (either URLs, local files, or file-like objects) to PostUpdate. You are limited to a maximum of 4 media files per tweet.

#### 4.3 New Methods

#### 4.3.1 twitter.api.Api.GetBlocksIDs()

• Returns all the users currently blocked by the authenticated user as user IDs. The user IDs will be integers.

#### 4.3.2 twitter.api.Api.GetBlocksIDsPaged()

Returns one page, specified by the cursor parameter, of the users currently blocked by the authenticated user as
user IDs.

#### 4.3.3 twitter.api.Api.GetBlocksPaged()

• Allows you to page through the currently authenticated user's blocked users. Method returns three values: the next cursor, the previous cursor, and a list of twitter. User instances representing the blocked users.

#### 4.3.4 twitter.api.Api.GetListMembersPaged()

- Allows you to page through a the members of a given twitter.list.List.
- cursor parameter operates as with other methods, denoting the page of members that you wish to retrieve.
- Returns next\_cursor, previous\_cursor, and a list containing the users that are members of the given twitter.list.List.

#### 4.3.5 twitter.api.Api.GetListsPaged()

- Much like twitter.api.Api.GetFriendsPaged() and similar methods, this allows you to retrieve an arbitrary page of twitter.list.List for either the currently authenticated user or a user specified by user\_id or screen\_name.
- cursor should be -1 for the first page.
- Returns the next\_cursor, previous\_cursor, and a list of twitter.list.List instances.

#### 4.3.6 twitter.api.Api.UploadMediaChunked()

- API method allows chunked upload to upload.twitter.com. Similar to Api.PostMedia(), this method can take either a local filename (str), a URL (str), or a file-like object. The image or video type will be determined by mimetypes (see twitter.twitter\_utils.parse\_media\_file() for details).
- Optionally, you can specify a chunk\_size for uploads when instantiating the Api object. This should be given in bytes. The default is 1MB (that is, 1048576 bytes). Any chunk\_size given below 16KB will result in a warning: Twitter will return an error if you try to upload more than 999 chunks of data; for example, if you are uploading a 15MB video, then a chunk\_size lower than 15729 bytes will result in 1000 APPEND commands being sent to the API, so you'll get an error. 16KB seems like a reasonable lower bound, but if your use case is well-defined, then python-twitter will not enforce this behavior.
- Another thing to take into consideration: if you're working in a RAM-constrained environment, a very large chunk\_size will increase your RAM usage when uploading media through this endpoint.
- The return value will be the media\_id of the uploaded file.

#### 4.3.7 twitter.api.Api.UploadMediaSimple()

- Provides the ability to upload a single media file to Twitter without using the ChunkedUpload endpoint. This
  method should be used on smaller files and reduces the roundtrips from Twitter from three (for UploadMediaChunked) to one.
- Return value is the media id of the uploaded file.

4.3. New Methods

Changelog

#### 5.1 Version 3.4.2

#### Bugfixes:

• Allow upload of GIFs with size up to 15mb. See #538

#### 5.2 Version 3.4.1

#### **Bugfixes:**

- Fix an issue where twitter.twitter\_utils.calc\_expected\_status\_length() was failing for python 2 due to a failure to convert a bytes string to unicode. Github issue #546.
- Documentation fix for twitter.api.Api.UsersLookup(). UsersLookup can take a string or a list and properly parses both of them now. Github issues #535 and #549.
- Properly decode response content for twitter.twitter\_utils.http\_to\_file(). Github issue #521.
- Fix an issue with loading extended\_tweet entities from Streaming API where tweets would be truncated when converting to a twitter.models.Status. Github issues #491 and #506.

#### 5.3 Version 3.4

#### 5.3.1 Deprecations

- twitter.api.Api.UpdateBackgroundImage(). Please make sure that your code does not call this function as it will now return a hard error. There is no replacement function. This was deprecated by Twitter around July 2015.
- twitter.api.Api.PostMedia() has been removed. Please use twitter.api.Api. PostUpdate() instead.

• twitter.api.Api.PostMultipleMedia(). Please use twitter.api.Api.PostUpdate() instead.

#### 5.4 Version 3.3.1

• Adds support for 280 character limit.

#### 5.5 Version 3.3

- Adds application only authentication. See Twitter's documentation for details. To use application only authentication, pass *application\_only\_auth* when creating the Api; the bearer token will be automatically retrieved.
- Adds function twitter.api.GetAppOnlyAuthToken()
- Adds *filter\_level* keyword argument for twitter.api.GetStreamFilter(), twitter.api. GetUserStream()
- Adds *proxies* keyword argument for creating an Api instance. Pass a dictionary of proxies for the request to pass through, if not specified allows requests lib to use environmental variables for proxy if any.
- $\bullet$  Adds support for  $quoted\_status$  to the twitter.models.Status model.

#### 5.6 Version 3.2.1

- twitter\_twitter\_utils.calc\_expected\_status\_length() should now function properly. Previously, URLs would be counted incorrectly. See PR #416
- twitter.api.Api.PostUpdates() now passes any keyword arguments on the edge case that only one tweet was actually being posted.

#### 5.7 Version 3.2

#### 5.7.1 Deprecations

Nothing is being deprecationed this version, however here's what's being deprecated as of v. 3.3.0:

- twitter.api.Api.UpdateBackgroundImage(). Please make sure that your code does not call this function as it will be returning a hard error. There is no replace function. This was deprecated by Twitter around July 2015.
- twitter.api.Api.PostMedia() will be removed. Please use twitter.api.Api.PostUpdate() instead.
- twitter.api.Api.PostMultipleMedia(). Please use twitter.api.Api.PostUpdate() instead.
- twitter.api.GetFriends() will no longer accept a *cursor* or *count* parameter. Please use twitter. api.GetFriendsPaged() instead.
- twitter.api.GetFollowers() will no longer accept a *cursor* or *count* parameter. Please use twitter.api.GetFollowersPaged() instead.

#### 5.7.2 What's New

- We've added new deprecation warnings, so it's easier to track when things go away. All of python-twitter's deprecation warnings will be a subclass of twitter.error. PythonTwitterDeprecationWarning and will have a version number associated with them such as twitter.error.PythonTwitterDeprecationWarning330.
- twitter.models.User now contains a following attribute, which describes whether the authenticated user is following the User. PR #351
- twitter.models.DirectMessage contains a full twitter.models.User object for both the DirectMessage.sender and DirectMessage.recipient properties. PR #384.
- You can now upload Quicktime movies (\* .mov). PR #372.
- If you have a whitelisted app, you can now get the authenticated user's email address through a call to twitter.api.Api.VerifyCredentials(). If your app isn't whitelisted, no error is returned. PR #376.
- Google App Engine support has been reintegrated into the library. Check out PR #383.
- video\_info is now available on a twitter.models.Media object, which allows access to video urls/bitrates/etc. in the extended entities node of a tweet.

#### 5.7.3 What's Changed

- twitter.models.Trend's volume attribute has been renamed tweet\_volume in line with Twitter's naming
  convention. This change should allow users to access the number of tweets being tweeted for a given Trend. PR
  #375
- twitter.ratelimit.RateLimit should behave better now and adds a 1-second padding to requests after sleeping.
- twitter.ratelimit.RateLimit now keeps track of your rate limit status even if you don't have sleep\_on\_rate\_limit set to True when instatiating the API. If you want to add different behavior on hitting a rate limit, you should be able to now by querying the rate limit object. See PR #370 for the technical details of the change. There should be no difference in behavior for the defaults, but let us know.

#### 5.7.4 Bugfixes

- twitter.models.Media again contains a sizes attribute, which was missed back in the Version 3.0 release. PR #360
- The previously bloated twitter.api.Api.UploadMediaChunked() function has been broken out into three related functions and fixes two an incompatibility with python 2.7. Behavior remains the same, but this should simplify matters. PR #347
- Fix for twitter.api.Api.PostUpdate() where a passing an integer to the media parameter would cause an iteration error to occur. PR #347
- Fix for 401 errors that were occuring in the Streaming Endpoints. PR #364

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#### 5.8 Version 3.1

#### 5.8.1 What's New

- twitter.api.Api.PostMediaMetadata() Method allows the posting of alt text (hover text) to a photo on Twitter. Note that it appears that you have to call this method prior to attaching the photo to a status.
- A couple new methods have been added related to showing the connections between two users:
  - twitter.api.Api.ShowFriendship() shows the connection between two users (i.e., are they following each other?)
  - twitter.api.Api.IncomingFriendship() shows all of the authenticated user's pending follower requests (if the user has set their account to private).
  - twitter.api.Api.OutgoingFriendship() shows the authenticated user's request to follow other users (i.e. the user has attempted to follow a private account).
- Several methods were added related to muting users:
  - twitter.api.Api.GetMutes() returns all users the currently authenticated user is muting (as twitter.models.User objects).
  - twitter.api.Api.GetMutesPaged() returns a page of twitter.models.User objects.
  - twitter.api.Api.GetMutesIDs() returns all of the users the currently authenticated user is muting as integers.
  - twitter.api.Api.GetMutesIDsPaged() returns a single page of the users the currently authenticated user is muting as integers.

### 5.8.2 What's Changed

- twitter.api.Api.GetStatus() Now accepts the keyword argument include\_ext\_alt\_text which will request alt text to be included with the Status object being returned (if available). Defaults to True.
- [model].\_\_repr\_\_() functions have been revised for better Unicode compatibility. If you notice any weirdness, please let us know.
- twitter.api.Api() no longer accepts the shortner parameter; however, see examples/shorten\_url.py for an example of how to use a URL shortener with the API.
- twitter.api.Api.\_Encode() and twitter.api.Api.\_EncodePostData() have both been refactored out of the API.
- twitter.models.Media now has an attribute ext\_alt\_text for alt (hover) text for images posted to Twitter.
- twitter.models.Status no longer has the properties relative\_created\_at, now, or Now. If you require a relative time, we suggest using a third-party library.
- Updated examples, specifically examples/twitter-to-xhtml.py, examples/view\_friends.py, examples/shorten\_url.py
- Updated get\_access\_token.py script to be python3 compatible.
- twitter.api.Api.GetStreamFilter() now accepts an optional languages parameter as a list.

Rate Limiting

#### 6.1 Overview

Twitter imposes rate limiting based either on user tokens or application tokens. Please see: API Rate Limits for a more detailed explanation of Twitter's policies. What follows will be a summary of how Python-Twitter attempts to deal with rate limits and how you should expect those limits to be respected (or not).

Python-Twitter tries to abstract away the details of Twitter's rate limiting by allowing you to globally respect those limits or ignore them. If you wish to have the application sleep when it hits a rate limit, you should instantiate the API with sleep\_on\_rate\_limit=True like so:

#### By default, python-twitter will raise a hard error for rate limits

Effectively, when the API determines that the **next** call to an endpoint will result in a rate limit error being thrown by Twitter, it will sleep until you are able to safely make that call. For most API methods, the headers in the response from Twitter will contain the following information:

x-rate-limit-limit: The number of times you can request the given endpoint within a certain number of minutes (otherwise known as a window).

x-rate-limit-remaining: The number of times you have left for a given endpoint within a window.

x-rate-limit-reset: The number of seconds left until the window resets.

For most endpoints, this is 15 requests per 15 minutes. So if you have set the global <code>sleep\_on\_rate\_limit</code> to <code>True</code>, the process looks something like this:

```
api.GetListMembersPaged()
# GET /list/{id}/members.json?cursor=-1
# GET /list/{id}/members.json?cursor=2
# GET /list/{id}/members.json?cursor=3
# GET /list/{id}/members.json?cursor=4
# GET /list/{id}/members.json?cursor=5
# GET /list/{id}/members.json?cursor=6
# GET /list/{id}/members.json?cursor=7
# GET /list/{id}/members.json?cursor=8
# GET /list/{id}/members.json?cursor=9
# GET /list/{id}/members.json?cursor=10
# GET /list/{id}/members.json?cursor=11
# GET /list/{id}/members.json?cursor=12
# GET /list/{id}/members.json?cursor=13
# GET /list/{id}/members.json?cursor=14
# This last GET request returns a response where x-rate-limit-remaining
# is equal to 0, so the API sleeps for 15 minutes
# GET /list/{id}/members.json?cursor=15
# ... etc ...
```

If you would rather not have your API instance sleep when hitting, then do not pass sleep\_on\_rate\_limit=True to your API instance. This will cause the API to raise a hard error when attempting to make call #15 above.

#### 6.2 Technical

The twitter/ratelimit.py file contains the code that handles storing and checking rate limits for endpoints. Since Twitter does not send any information regarding the endpoint that you are requesting with the x-rate-limit-\* headers, the endpoint is determined by some regex using the URL.

The twitter.Api instance contains an Api.rate\_limit object that you can inspect to see the current limits for any URL and exposes a number of methods for querying and setting rate limits on a per-resource (i.e., endpoint) basis. See twitter.ratelimit.RateLimit() for more information.

### Models

Python-twitter provides the following models of the objects returned by the Twitter API:

- twitter.models.Category
- twitter.models.DirectMessage
- twitter.models.Hashtag
- twitter.models.List
- twitter.models.Media
- twitter.models.Status
- twitter.models.Trend
- twitter.models.Url
- twitter.models.User
- twitter.models.UserStatus

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Searching

### 8.1 Raw Queries

To the Api.GetSearch() method, you can pass the parameter raw\_query, which should be the query string you wish to use for the search **omitting the leading "?"**. This will override every other parameter. Twitter's search parameters are quite complex, so if you have a need for a very particular search, you can find Twitter's documentation at https://dev.twitter.com/rest/public/search.

For example, if you want to search for only tweets containing the word "twitter", then you could do the following:

```
results = api.GetSearch(
   raw_query="q=twitter%20&result_type=recent&since=2014-07-19&count=100")
```

If you want to build a search query and you're not quite sure how it should look all put together, you can use Twitter's Advanced Search tool: https://twitter.com/search-advanced, and then use the part of search URL after the "?" to use for the Api, removing the &src=typd portion.

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## Using with Django

 $Additional \ template \ tags \ that \ expand \ tweet \ urls \ and \ urlize \ tweet \ text. \ See \ the \ django \ template \ tags \ available \ for \ use \ with \ python-twitter: \ https://github.com/radzhome/python-twitter-django-tags$ 

## **Modules Documentation**

10.1 API

10.2 Models

10.3 Utilities

Introduction

This library provides a pure Python interface for the Twitter API. It works with Python 2.7+ and Python 3.

Twitter provides a service that allows people to connect via the web, IM, and SMS. Twitter exposes a web services API and this library is intended to make it even easier for Python programmers to use.

## Indices and tables

- genindex
- modindex
- search