

Welcome to Spotipy!

Spotipy is a lightweight Python library for the Spotify Web API. With Spotipy you get full access to all of the music data provided by the Spotify platform.

Here's a quick example of using *Spotipy* to list the names of all the albums released by the artist 'Birdy':

```
import spotipy
birdy_uri = 'spotify:artist:2WX2uTcsvV5OnS0inACecP'
spotify = spotipy.Spotify()

results = spotify.artist_albums(birdy_uri, album_type='album')
albums = results['items']
while results['next']:
    results = spotify.next(results)
    albums.extend(results['items'])

for album in albums:
    print(album['name'])
```

Here's another example showing how to get 30 second samples and cover art for the top 10 tracks for Led Zeppelin:

```
import spotipy

lz_uri = 'spotify:artist:36QJpDe2go2KgaRleHCDTp'

spotify = spotipy.Spotify()
  results = spotify.artist_top_tracks(lz_uri)

for track in results['tracks'][:10]:
    print 'track : ' + track['name']
    print 'audio : ' + track['preview_url']
    print 'cover art: ' + track['album']['images'][0]['url']
    print
```

Finally, here's an example that will get the URL for an artist image given the artist's name:

```
import spotipy
import sys

spotify = spotipy.Spotify()

if len(sys.argv) > 1:
    name = ' '.join(sys.argv[1:])
else:
    name = 'Radiohead'

results = spotify.search(q='artist:' + name, type='artist')
items = results['artists']['items']
if len(items) > 0:
    artist = items[0]
    print artist['name'], artist['images'][0]['url']
```

Features

Spotipy supports all of the features of the Spotify Web API including access to all end points, and support for user authorization. For details on the capabilities you are encouraged to review the Spotify Web API documentation.

Installation

Install Spotipy with:

```
pip install spotipy
```

Or with:

```
easy_install spotipy
```

Or you can get the source from github at https://github.com/plamere/spotipy

Getting Started

Non-Authorized requests

For methods that do not require authorization, simply create a Spotify object and start making method calls like so:

```
import spotipy
spotify = spotipy.Spotify()
results = spotify.search(q='artist:' + name, type='artist')
print results
```

Authorized requests

Many methods require user authentication. For these requests you will need to generate an authorization token that indicates that the user has granted permission for your application to perform the given task. You will need to register your app to get the credentials necessary to make authorized calls.

Even if your script does not have an accessible URL you need to specify one when registering your application where the spotify authentication API will redirect to after successful login. The URL doesn't need to work or be accessible, you can specify "http://localhost/", after successful login you just need to copy the "http://localhost/?code=..." URL from your browser and paste it to the console where your script is running.

Register your app at My Applications.

spotipy supports two authorization flows:

- The Authorization Code flow This method is suitable for long-running applications which the user logs into once. It provides an access token that can be refreshed.
- The Client Credentials flow The method makes it possible to authenticate your requests to the Spotify Web API and to obtain a higher rate limit than you would

Authorization Code Flow

To support the **Authorization Code Flow** *Spotipy* provides a utility method util.prompt_for_user_token that will attempt to authorize the user. You can pass your app credentials directly into the method as arguments:

```
util.prompt_for_user_token(username,scope,client_id='your-app-redirect-
url',client_secret='your-app-redirect-url',redirect_uri='your-app-redirect-url')
```

or if you are reluctant to immortalize your app credentials in your source code, you can set environment variables like so:

```
export SPOTIPY_CLIENT_ID='your-spotify-client-id'
export SPOTIPY_CLIENT_SECRET='your-spotify-client-secret'
export SPOTIPY_REDIRECT_URI='your-app-redirect-url'
```

Call util.prompt_for_user_token method with the username and the desired scope (see Using Scopes for information about scopes) and credentials. This will coordinate the user authorization via your web browser and ask for the SPOTIPY_REDIRECT_URI you were redirected to with the authorization token appended. The credentials are cached locally and are used to automatically re-authorized expired tokens.

Here's an example of getting user authorization to read a user's saved tracks:

```
import sys
import spotipy
import spotipy.util as util
scope = 'user-library-read'
if len(sys.argv) > 1:
   username = sys.argv[1]
    print "Usage: %s username" % (sys.argv[0],)
    svs.exit()
token = util.prompt for user token(username, scope)
if token:
    sp = spotipy.Spotify(auth=token)
    results = sp.current user saved tracks()
    for item in results['items']:
       track = item['track']
       print track['name'] + ' - ' + track['artists'][0]['name']
else:
    print "Can't get token for", username
```

Client Credentials Flow

To support the **Client Credentials Flow** *Spotipy* provides a class SpotifyClientCredentials that can be used to authenticate requests like so:

```
import spotipy
from spotipy.oauth2 import SpotifyClientCredentials

client_credentials_manager = SpotifyClientCredentials()
sp = spotipy.Spotify(client_credentials_manager=client_credentials_manager)

playlists = sp.user_playlists('spotify')
while playlists:
    for i, playlist in enumerate(playlists['items']):
        print("%4d %s %s" % (i + 1 + playlists['offset'], playlist['uri'], playlist['name']))
    if playlists['next']:
        playlists = sp.next(playlists)
    else:
        playlists = None
```

Client credentials flow is appropriate for requests that do not require access to a user's private data. Even if you are only making calls that do not require authorization, using this flow yields the benefit of a higher rate limit

IDs URIs and URLs

Spotipy supports a number of different ID types:

- Spotify URI The resource identifier that you can enter, for example, in the Spotify Desktop client's search box to locate an artist, album, or track. Example: spotify:track:6rqhFgbbKwnb9MLmUQDhG6
- Spotify URL An HTML link that opens a track, album, app, playlist or other Spotify resource in a Spotify client. Example: http://open.spotify.com/track/6rghFgbbKwnb9MLmUQDhG6
- Spotify ID A base-62 number that you can find at the end of the Spotify URI (see above) for an artist, track, album, etc. Example: 6rqhFgbbKwnb9MLmUQDhG6

In general, any *Spotipy* method that needs an artist, album, track or playlist ID will accept ids in any of the above form

Examples

Here are a few more examples of using Spotipy.

Add tracks to a playlist:

```
import pprint
import sys
import spotipy
import spotipy.util as util
if len(sys.argv) > 3:
   username = sys.argv[1]
    playlist id = sys.argv[2]
    track_ids = sys.argv[3:]
    print "Usage: %s username playlist id track id ..." % (sys.argv[0],)
scope = 'playlist-modify-public'
token = util.prompt for user token(username, scope)
if token:
    sp = spotipy.Spotify(auth=token)
    sp.trace = False
   results = sp.user_playlist_add_tracks(username, playlist_id, track_ids)
   print results
else:
    print "Can't get token for", username
```

Shows the contents of every playlist owned by a user:

```
# shows a user's playlists (need to be authenticated via oauth)
import sys
import spotipy
import spotipy.util as util
def show_tracks(tracks):
   for i, item in enumerate(tracks['items']):
       track = item['track']
        print " %d %32.32s %s" % (i, track['artists'][0]['name'],
            track['name'])
if __name__ == '__main__':
   if len(sys.argv) > 1:
       username = sys.argv[1]
        print "Whoops, need your username!"
        print "usage: python user_playlists.py [username]"
        sys.exit()
   token = util.prompt_for_user_token(username)
    if token:
        sp = spotipy.Spotify(auth=token)
        playlists = sp.user_playlists(username)
        for playlist in playlists['items']:
            if playlist['owner']['id'] == username:
                print
                print playlist['name']
                print ' total tracks', playlist['tracks']['total']
                results = sp.user_playlist(username, playlist['id'],
                    fields="tracks,next")
                tracks = results['tracks']
                show_tracks(tracks)
                while tracks['next']:
                    tracks = sp.next(tracks)
                    show_tracks(tracks)
   else:
       print "Can't get token for", username
```

More Examples

There are many more examples of how to use Spotipy in the Examples Directory on Github

API Reference

client Module

class spotipy.client.Spotify(auth=None, requests_session=True,
client_credentials_manager=None, proxies=None, requests_timeout=None)

Bases: object

Example usage:

```
import spotipy
urn = 'spotify:artist:3jOstUTkEu2JkjvRdBA5Gu'
sp = spotipy.Spotify()

sp.trace = True # turn on tracing
sp.trace_out = True # turn on trace out

artist = sp.artist(urn)
print(artist)

user = sp.user('plamere')
print(user)
```

__init__(auth=None, requests_session=True, client_credentials_manager=None, proxies=None, requests_timeout=None)

Create a Spotify API object.

Parameters:

- auth An authorization token (optional)
- requests_session A Requests session object or a truthy value to create one. A falsy value disables sessions. It should generally be a good idea to keep sessions enabled for performance reasons (connection pooling).
- client_credentials_manager SpotifyClientCredentials object
- proxies Definition of proxies (optional)
- requests_timeout Tell Requests to stop waiting for a response after a given number of seconds

album(album_id)

returns a single album given the album's ID, URIs or URL

Parameters:

album_id - the album ID, URI or URL

```
album tracks(album_id, limit=50, offset=0)
```

Get Spotify catalog information about an album's tracks

Parameters:

- album id the album ID, URI or URL
- limit the number of items to return
- offset the index of the first item to return

albums(albums)

returns a list of albums given the album IDs, URIs, or URLs

Parameters:

albums - a list of album IDs, URIs or URLs

artist(artist_id)

returns a single artist given the artist's ID, URI or URL

Parameters:

• artist id - an artist ID, URI or URL

artist_albums(artist_id, album_type=None, country=None, limit=20, offset=0)

Get Spotify catalog information about an artist's albums

Parameters:

- artist id the artist ID, URI or URL
- album_type 'album', 'single', 'appears_on', 'compilation'
- country limit the response to one particular country.
- limit the number of albums to return
- offset the index of the first album to return

artist_related_artists(artist_id)

Get Spotify catalog information about artists similar to an identified artist. Similarity is based on analysis of the Spotify community's listening history.

Parameters:

• artist id - the artist ID, URI or URL

artist_top_tracks(artist_id, country='US')

Get Spotify catalog information about an artist's top 10 tracks by country.

Parameters:

- artist_id the artist ID, URI or URL
- country limit the response to one particular country.

artists(artists)

returns a list of artists given the artist IDs, URIs, or URLs

Parameters:

artists - a list of artist IDs, URIs or URLs

audio analysis(id)

Get audio analysis for a track based upon its Spotify ID Parameters:

id - a track URIs, URLs or IDs

audio_features(tracks=[])

Get audio features for one or multiple tracks based upon their Spotify IDs Parameters:

• tracks - a list of track URIs, URLs or IDs, maximum: 50 ids

categories(country=None, locale=None, limit=20, offset=0)

Get a list of new album releases featured in Spotify

Parameters:

- country An ISO 3166-1 alpha-2 country code.
- locale The desired language, consisting of an ISO 639 language code and an ISO 3166-1 alpha-2 country code, joined by an underscore.
- limit The maximum number of items to return. Default: 20. Minimum: 1.
 Maximum: 50
- offset The index of the first item to return. Default: 0 (the first object). Use with limit to get the next set of items.

category_playlists(category_id=None, country=None, limit=20, offset=0)

Get a list of new album releases featured in Spotify

Parameters:

- category_id The Spotify category ID for the category.
- country An ISO 3166-1 alpha-2 country code.
- limit The maximum number of items to return. Default: 20. Minimum: 1.
 Maximum: 50
- offset The index of the first item to return. Default: 0 (the first object). Use with limit to get the next set of items.

current_playback(market=None)

Get information about user's current playback.

Parameters:

market - an ISO 3166-1 alpha-2 country code.

current_user()

Get detailed profile information about the current user. An alias for the 'me' method.

current_user_followed_artists(limit=20, after=None)

Gets a list of the artists followed by the current authorized user

Parameters:

limit - the number of tracks to return

• after - ghe last artist ID retrieved from the previous request

current_user_playing_track()

Get information about the current users currently playing track.

current_user_playlists(limit=50, offset=0)

Get current user playlists without required getting his profile Parameters:

- limit the number of items to return
- offset the index of the first item to return

current_user_recently_played(limit=50)

Get the current user's recently played tracks

Parameters:

• limit - the number of entities to return

current_user_saved_albums(limit=20, offset=0)

Gets a list of the albums saved in the current authorized user's "Your Music" library

Parameters:

- limit the number of albums to return
- offset the index of the first album to return

current user saved albums add(albums=[])

Add one or more albums to the current user's "Your Music" library. Parameters:

• albums - a list of album URIs, URLs or IDs

current_user_saved_tracks(limit=20, offset=0)

Gets a list of the tracks saved in the current authorized user's "Your Music" library

Parameters:

- limit the number of tracks to return
- offset the index of the first track to return

current user saved tracks add(tracks=None)

Add one or more tracks to the current user's "Your Music" library.

Parameters:

tracks - a list of track URIs, URLs or IDs

```
current_user_saved_tracks_contains(tracks=None)
```

Check if one or more tracks is already saved in the current Spotify user's "Your Music" library.

Parameters:

• tracks - a list of track URIs, URLs or IDs

current_user_saved_tracks_delete(tracks=None)

Remove one or more tracks from the current user's "Your Music" library.

Parameters:

• tracks - a list of track URIs, URLs or IDs

current_user_top_artists(limit=20, offset=0, time_range='medium_term')

Get the current user's top artists

Parameters:

- limit the number of entities to return
- offset the index of the first entity to return
- time_range Over what time frame are the affinities computed Valid-values: short_term, medium_term, long_term

current_user_top_tracks(limit=20, offset=0, time_range='medium_term')

Get the current user's top tracks

Parameters:

- limit the number of entities to return
- offset the index of the first entity to return
- time_range Over what time frame are the affinities computed Valid-values: short_term, medium_term, long_term

currently_playing(market=None)

Get user's currently playing track.

Parameters:

market - an ISO 3166-1 alpha-2 country code.

devices()

Get a list of user's available devices.

featured_playlists(locale=None, country=None, timestamp=None, limit=20, offset=0)

Get a list of Spotify featured playlists

Parameters:

- locale The desired language, consisting of a lowercase ISO 639 language code and an uppercase ISO 3166-1 alpha-2 country code, joined by an underscore.
- country An ISO 3166-1 alpha-2 country code.
- timestamp A timestamp in ISO 8601 format: yyyy-MM-ddTHH:mm:ss. Use this parameter to specify the user's local time to get results tailored for that specific date and time in the day
- limit The maximum number of items to return. Default: 20. Minimum: 1.
 Maximum: 50
- offset The index of the first item to return. Default: 0 (the first object). Use with limit to get the next set of items.

max_get_retries= 10

me()

Get detailed profile information about the current user. An alias for the 'current_user' method.

new_releases(country=None, limit=20, offset=0)

Get a list of new album releases featured in Spotify

Parameters:

- country An ISO 3166-1 alpha-2 country code.
- limit The maximum number of items to return. Default: 20. Minimum: 1.
 Maximum: 50
- offset The index of the first item to return. Default: 0 (the first object). Use with limit to get the next set of items.

next(result)

returns the next result given a paged result

Parameters:

• result - a previously returned paged result

next track(device_id=None)

Skip user's playback to next track.

Parameters:

device_id - device target for playback

pause_playback(device_id=None)

Pause user's playback.

Parameters:

• device id - device target for playback

previous(result)

returns the previous result given a paged result

Parameters:

· result - a previously returned paged result

previous_track(device_id=None)

Skip user's playback to previous track.

Parameters:

device_id - device target for playback

recommendation genre seeds()

Get a list of genres available for the recommendations function.

recommendations(seed_artists=None, seed_genres=None, seed_tracks=None, limit=20, country=None, **kwargs)

Get a list of recommended tracks for one to five seeds.

Parameters:

- seed artists a list of artist IDs, URIs or URLs
- seed_tracks a list of artist IDs, URIs or URLs
- seed_genres a list of genre names. Available genres for recommendations can be found by calling recommendation_genre_seeds
- country An ISO 3166-1 alpha-2 country code. If provided, all results will be playable in this country.
- limit The maximum number of items to return. Default: 20. Minimum: 1.
 Maximum: 100
- min/max/target_<attribute> For the tuneable track attributes listed in the documentation, these values provide filters and targeting on results.

repeat(state, device_id=None)

Set repeat mode for playback.

Parameters:

- state track, context, or off
- device_id device target for playback

search(q, limit=10, offset=0, type='track', market=None)

searches for an item

Parameters:

- q the search query
- limit the number of items to return
- offset the index of the first item to return
- type the type of item to return. One of 'artist', 'album',

'track' or 'playlist'

• market - An ISO 3166-1 alpha-2 country code or the string from_token.

seek_track(position_ms, device_id=None)

Seek to position in current track.

Parameters:

- · position_ms position in milliseconds to seek to
- device_id device target for playback

shuffle(state, device_id=None)

Toggle playback shuffling.

Parameters:

- state true or false
- device id device target for playback

start_playback(device_id=None, context_uri=None, uris=None, offset=None)

Start or resume user's playback.

Provide a context_uri to start playback or a album, artist, or playlist.

Provide a uris list to start playback of one or more tracks.

Provide *offset* as {"position": <int>} or {"uri": "<track uri>"} to start playback at a particular offset.

Parameters:

- device_id device target for playback
- context_uri spotify context uri to play
- uris spotify track uris
- offset offset into context by index or track

trace= False

track(track_id)

returns a single track given the track's ID, URI or URL

Parameters:

• track id - a spotify URI, URL or ID

tracks(tracks, market=None)

returns a list of tracks given a list of track IDs, URIs, or URLs

Parameters:

- tracks a list of spotify URIs, URLs or IDs
- market an ISO 3166-1 alpha-2 country code.

transfer_playback(device_id, force_play=True)

Transfer playback to another device. Note that the API accepts a list of device ids, but only actually supports one.

Parameters:

- device_id transfer playback to this device
- force_play true: after transfer, play. false:

keep current state.

user(user)

Gets basic profile information about a Spotify User

Parameters:

• user - the id of the usr

user follow artists(ids=[])

Follow one or more artists Parameters:

• ids - a list of artist IDs

user_follow_users(ids=[])

Follow one or more users Parameters:

• ids - a list of user IDs

user playlist(user, playlist_id=None, fields=None)

Gets playlist of a user Parameters:

- user the id of the user
- playlist_id the id of the playlist
- fields which fields to return

user_playlist_add_tracks(user, playlist_id, tracks, position=None)

Adds tracks to a playlist

Parameters:

- user the id of the user
- playlist id the id of the playlist
- tracks a list of track URIs, URLs or IDs
- position the position to add the tracks

user_playlist_change_details(user, playlist_id, name=None, public=None, collaborative=None, description=None)

Changes a playlist's name and/or public/private state

Parameters:

- user the id of the user
- playlist id the id of the playlist
- name optional name of the playlist
- public optional is the playlist public
- collaborative optional is the playlist collaborative
- description optional description of the playlist

user_playlist_create(user, name, public=True, description=")

Creates a playlist for a user

Parameters:

- · user the id of the user
- name the name of the playlist
- public is the created playlist public
- description the description of the playlist

user_playlist_follow_playlist(playlist_owner_id, playlist_id)

Add the current authenticated user as a follower of a playlist.

Parameters:

- playlist_owner_id the user id of the playlist owner
- playlist_id the id of the playlist

user_playlist_is_following(playlist_owner_id, playlist_id, user_ids)

Check to see if the given users are following the given playlist

Parameters:

- playlist owner id the user id of the playlist owner
- playlist_id the id of the playlist
- user_ids the ids of the users that you want to check to see if they follow the playlist. Maximum: 5 ids.

user_playlist_remove_all_occurrences_of_tracks(user, playlist_id, tracks,
snapshot_id=None)

Removes all occurrences of the given tracks from the given playlist

Parameters:

- user the id of the user
- playlist_id the id of the playlist
- tracks the list of track ids to add to the playlist
- snapshot_id optional id of the playlist snapshot

user_playlist_remove_specific_occurrences_of_tracks(user, playlist_id, tracks,
snapshot_id=None)

Removes all occurrences of the given tracks from the given playlist

Parameters:

- user the id of the user
- playlist_id the id of the playlist
- tracks an array of objects containing Spotify URIs of the tracks to remove with their current positions in the playlist. For example:

snapshot_id - optional id of the playlist snapshot

user_playlist_reorder_tracks(user, playlist_id, range_start, insert_before, range_length=1,
snapshot_id=None)

Reorder tracks in a playlist

Parameters:

- user the id of the user
- playlist_id the id of the playlist
- range start the position of the first track to be reordered
- range_length optional the number of tracks to be reordered (default: 1)
- insert_before the position where the tracks should be inserted
- snapshot_id optional playlist's snapshot ID

Replace all tracks in a playlist

Parameters:

- user the id of the user
- playlist_id the id of the playlist
- tracks the list of track ids to add to the playlist

 ${\bf user_playlist_tracks} (user, playlist_id=None, fields=None, limit=100, offset=0, market=None)$

Get full details of the tracks of a playlist owned by a user.

Parameters:

- user the id of the user
- playlist id the id of the playlist
- fields which fields to return
- limit the maximum number of tracks to return
- offset the index of the first track to return
- market an ISO 3166-1 alpha-2 country code.

user_playlist_unfollow(user, playlist_id)

Unfollows (deletes) a playlist for a user

Parameters:

- user the id of the user
- name the name of the playlist

```
user playlists(user, limit=50, offset=0)
```

Gets playlists of a user

Parameters:

- user the id of the usr
- limit the number of items to return
- offset the index of the first item to return

volume(volume_percent, device_id=None)

Set playback volume.

Parameters:

- volume_percent volume between 0 and 100
- device_id device target for playback

exception spotipy.client.SpotifyException(http_status, code, msg, headers=None)

Bases: exceptions.Exception

```
init (http_status, code, msg, headers=None)
```

oauth2 Module

class spotipy.oauth2.SpotifyClientCredentials(client_id=None, client_secret=None,
proxies=None)

Bases: object

OAUTH_TOKEN_URL= 'https://accounts.spotify.com/api/token'

__init__(client_id=None, client_secret=None, proxies=None)

You can either provid a client_id and client_secret to the constructor or set SPOTIPY_CLIENT_ID and SPOTIPY_CLIENT_SECRET environment variables

get_access_token()

If a valid access token is in memory, returns it Else feches a new token and returns it

is_token_expired(token_info)

class spotipy.oauth2.SpotifyOAuth(client_id, client_secret, redirect_uri, state=None, scope=None,
cache_path=None, proxies=None)

Bases: object

Implements Authorization Code Flow for Spotify's OAuth implementation.

OAUTH AUTHORIZE URL= 'https://accounts.spotify.com/authorize'

OAUTH_TOKEN_URL = 'https://accounts.spotify.com/api/token'

__init__(client_id, client_secret, redirect_uri, state=None, scope=None, cache_path=None, proxies=None)

Creates a SpotifyOAuth object

Parameters:

- client_id the client id of your app
- client_secret the client secret of your app
- redirect_uri the redirect URI of your app
- state security state
- scope the desired scope of the request
- cache_path path to location to save tokens

get access token(code)

Gets the access token for the app given the code

Parameters:

• code - the response code

```
get authorize url(state=None, show_dialog=False)
```

Gets the URL to use to authorize this app

```
get_cached_token()
```

Gets a cached auth token

```
is_token_expired(token_info)
```

```
parse_response_code(url)
```

Parse the response code in the given response url

Parameters:

• url - the response url

refresh_access_token(refresh_token)

exception spotipy.oauth2.SpotifyOauthError

Bases: exceptions.Exception

spotipy.oauth2.is token expired(token_info)

util **Module**

spotipy.util.prompt_for_user_token(username, scope=None, client_id=None, client_secret=None, redirect_uri=None, cache_path=None)

prompts the user to login if necessary and returns the user token suitable for use with the spotipy. Spotify constructor

Parameters:

- username the Spotify username
- scope the desired scope of the request
- client_id the client id of your app
- client_secret the client secret of your app
- redirect_uri the redirect URI of your app
- cache_path path to location to save tokens

Support

You can ask questions about Spotipy on Stack Overflow. Don't forget to add the *Spotipy* tag, and any other relevant tags as well, before posting.

http://stackoverflow.com/questions/ask

If you think you've found a bug, let us know at Spotify Issues

Contribute

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License

https://github.com/plamere/spotipy/blob/master/LICENSE.txt

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