spotifyr

CRAN 2.2.3 (https://cran.r-project.org/package=spotifyr) downloads 1250/month

Overview

spotifyr is an R wrapper for pulling track audio features and other information from Spotify's Web API in bulk. By automatically batching API requests, it allows you to enter an artist's name and retrieve their entire discography in seconds, along with Spotify's audio features and track/album popularity metrics. You can also pull song and playlist information for a given Spotify User (including yourself!).

Installation

CRAN version 2.1.0 (recommended)

```
install.packages (https://www.rdocumentation.org/packages/utils/topics/install.packages)('spotifyr
```

Development version

```
devtools::install_github (https://www.rdocumentation.org/packages/devtools/topics/reexports)('char
```

Authentication

First, set up a Dev account with Spotify to access their Web API here (https://developer.spotify.com/my-applications/#!/applications). This will give you your `Client ID` and `Client Secret`. Once you have those, you can pull your access token into R with `get_spotify_access_token()` (reference/get_spotify_access_token.html).

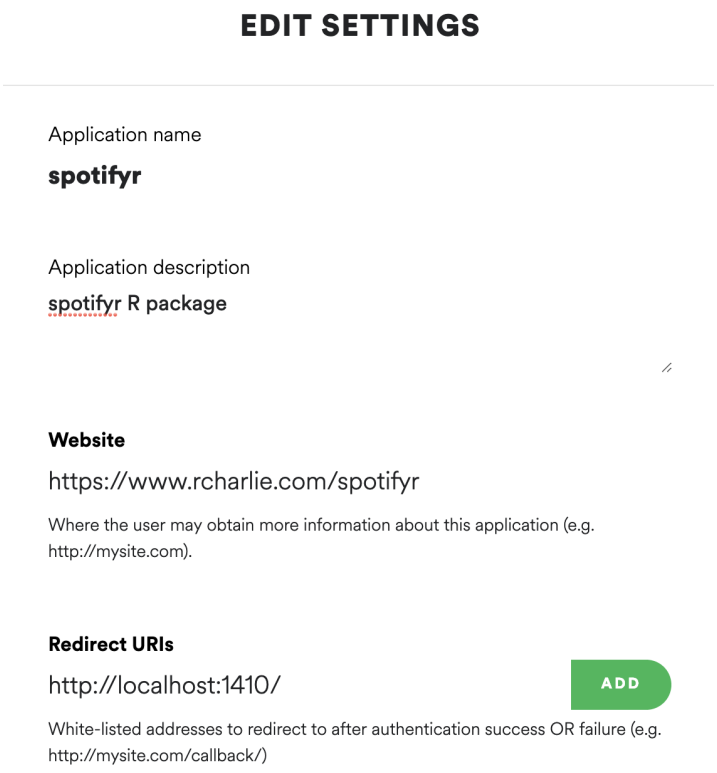
The easiest way to authenticate is to set your credentials to the System Environment variables `SPOTIFY_CLIENT_ID` and `SPOTIFY_CLIENT_SECRET`. The default arguments to `get_spotify_access_token()` (reference/get_spotify_access_token.html) (and all other functions in this package) will refer to those. Alternatively, you can set them manually and make sure to explicitly refer to your access token in each subsequent function call.

```
Sys.setenv (https://www.rdocumentation.org/packages/base/topics/Sys.setenv)(SPOTIFY_CLIENT_ID = 'x
Sys.setenv (https://www.rdocumentation.org/packages/base/topics/Sys.setenv)(SPOTIFY_CLIENT_SECRET

access_token <- get_spotify_access_token (reference/get_spotify_access_token.html)()
```

Authorization code flow

For certain functions and applications, you'll need to log in as a Spotify user. To do this, your Spotify Developer application needs to have a callback url. You can set this to whatever you want that will work with your application, but a good default option is `http://localhost:1410/` (see image below). For more information on authorization, visit the offical Spotify Developer Guide (https://developer.spotify.com/documentation/general/guides/authorization-guide/).



Usage

What was The Beatles' favorite key?

```
library (https://www.rdocumentation.org/packages/base/topics/library)(spotifyr)
beatles <- get_artist_audio_features (reference/get_artist_audio_features.html)('the beatles')
```

```
library (https://www.rdocumentation.org/packages/base/topics/library)(tidyverse)
library (https://www.rdocumentation.org/packages/base/topics/library)(knitr)

beatles %>%
    count(key_mode, sort = TRUE) %>%
    head (https://www.rdocumentation.org/packages/utils/topics/head)(5) %>%
    kable (https://www.rdocumentation.org/packages/knitr/topics/kable)()
```

key_mode	n
D major	24
G major	21
A major	13
F major	12
C major	11

Get your most recently played tracks

```
library (https://www.rdocumentation.org/packages/base/topics/library)(lubridate)

get_my_recently_played (reference/get_my_recently_played.html)(limit = 5) %>%
    mutate(artist.name = map_chr(track.artists, function(x) x$name[1]),
           played_at = as_datetime (http://lubridate.tidyverse.org/reference/as_date.html)(played_
    select(track.name, artist.name, track.album.name, played_at) %>%
    kable (https://www.rdocumentation.org/packages/knitr/topics/kable)()
```

track.name	artist.name	track.album.name	played_at
Take The Power Back	Rage Against The Machine	Rage Against The Machine - XX (20th Anniversary Special Edition)	2020-02-15 18:18:30
Killing In The Name	Rage Against The Machine	Rage Against The Machine - XX (20th Anniversary Special Edition)	2020-02-15 18:08:24
Bombtrack	Rage Against The Machine	Rage Against The Machine - XX (20th Anniversary Special Edition)	2020-02-15 18:03:09
Testify	Rage Against The Machine	The Battle Of Los Angeles	2020-02-15 17:59:07
War Within a Breath	Rage Against The Machine	The Battle Of Los Angeles	2020-02-15 17:54:41

Find your all time favorite artists

```
get_my_top_artists_or_tracks (reference/get_my_top_artists_or_tracks.html)(type = 'artists', time_
    select(name, genres) %>%
    rowwise %>%
    mutate(genres = paste (https://www.rdocumentation.org/packages/base/topics/paste)(genres, coll
    ungroup %>%
    kable (https://www.rdocumentation.org/packages/knitr/topics/kable)()
```

name	genres
Radiohead	alternative rock, art rock, melancholia, oxford indie, permanent wave, rock
Flying Lotus	afrofuturism, alternative hip hop, electronica, escape room, experimental hip hop, glitch, glitch hop, hip hop, indietronica, intelligent dance music, jazztronica, wonky
Onra	chillhop, japanese chillhop, wonky
Teebs	bass music, chillwave, electronica, experimental pop, indie jazz, indie r&b, indietronica, microhouse, wonky
Pixies	alternative rock, art rock, boston rock, garage rock, modern rock, noise pop, permanent wave, rock

Find your favorite tracks at the moment

```
get_my_top_artists_or_tracks (reference/get_my_top_artists_or_tracks.html)(type = 'tracks', time_r
    mutate(artist.name = map_chr(artists, function(x) x$name[1])) %>%
    select(name, artist.name, album.name) %>%
    kable (https://www.rdocumentation.org/packages/knitr/topics/kable)()
```

name	artist.name	album.name
Testify	Rage Against The Machine	The Battle Of Los Angeles
Guerrilla Radio	Rage Against The Machine	The Battle Of Los Angeles
Killing In The Name	Rage Against The Machine	Rage Against The Machine - XX (20th Anniversary Special Edition)
One for Nujabes	.Sinh	One for Nujabes

name	artist.name	album.name
Lantern Flies in Mist	Black Taffy	Elder Mantis

What's the most joyful Joy Division song?

My favorite audio feature has to be "valence," a measure of musical positivity.

```
joy <- get_artist_audio_features (reference/get_artist_audio_features.html)('joy division')
```

```
joy %>%
    arrange(-valence) %>%
    select(track_name, valence) %>%
    head (https://www.rdocumentation.org/packages/utils/topics/head)(5) %>%
    kable (https://www.rdocumentation.org/packages/knitr/topics/kable)()
```

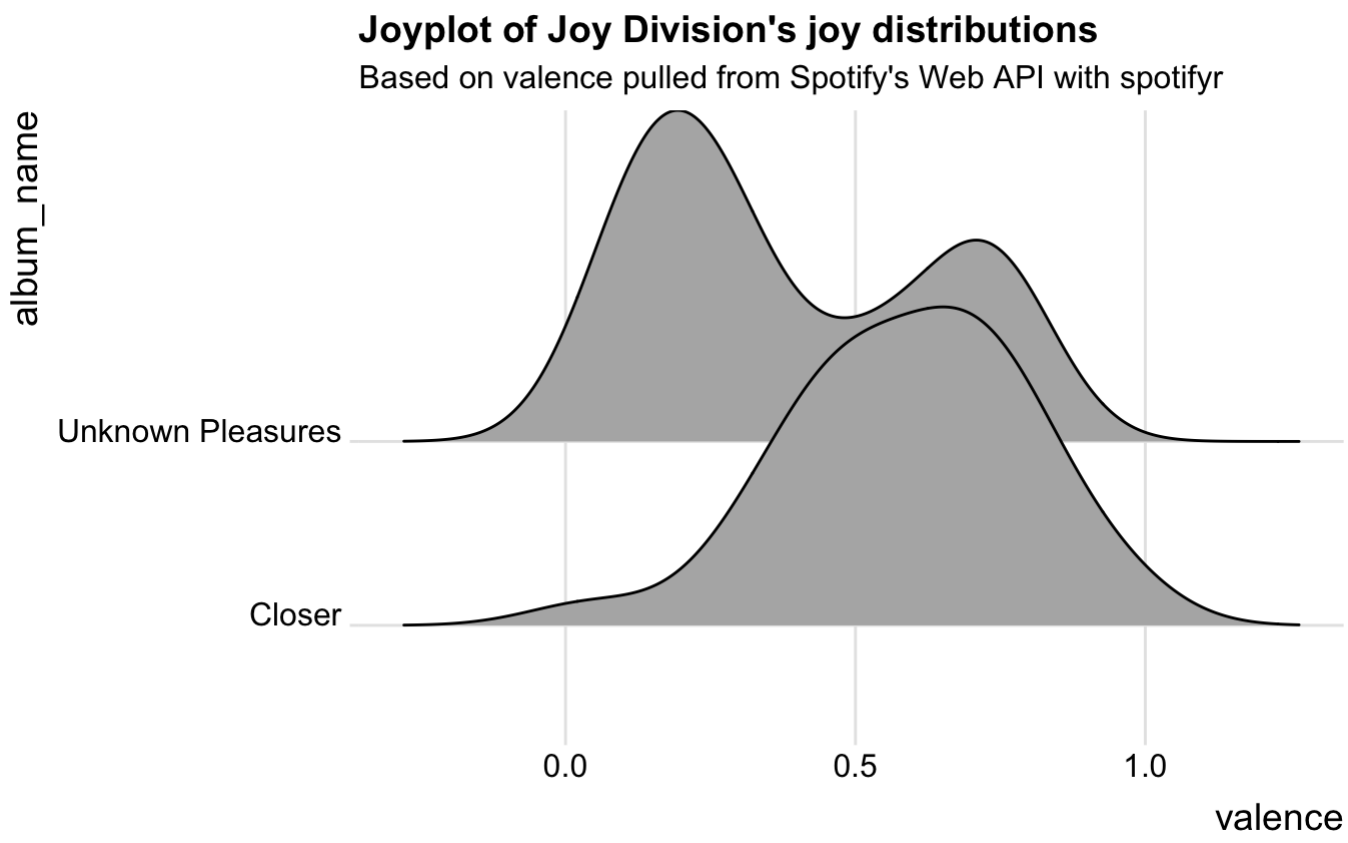
track_name	valence
Passover - 2007 Remaster	0.941
Passover - 2007 Remaster	0.941
Colony - 2007 Remaster	0.808
Colony - 2007 Remaster	0.808
Atrocity Exhibition - 2007 Remaster	0.787

Now if only there was some way to plot joy…

Joyplot of the emotional rollercoasters that are Joy Division's albums

```
library (https://www.rdocumentation.org/packages/base/topics/library)(ggjoy)

ggplot(joy, aes(x = valence, y = album_name)) +
    geom_joy (https://www.rdocumentation.org/packages/ggjoy/topics/ggjoy)() +
    theme_joy (https://www.rdocumentation.org/packages/ggjoy/topics/ggjoy)() +
    ggtitle("Joyplot of Joy Division's joy distributions", subtitle = "Based on valence pulled fro
```



Sentify: A Shiny app

This app (http://rcharlie.net/sentify/), powered by spotifyr, allows you to visualize the energy and valence (musical positivity) of all of Spotify's artists and playlists.

Dope stuff other people have done with spotifyr

The coolest thing about making this package has definitely been seeing all the awesome stuff other people have done with it. Here are a few examples:

Exploring the Spotify API with R: A tutorial for beginners, by a beginner (https://msmith7161.github.io/what-is-speechiness/), Mia Smith

Sentiment analysis of musical taste: a cross-European comparison (http://paulelvers.com/post/emotionsineuropeanmusic/), Paul Elvers

Blue Christmas: A data-driven search for the most depressing Christmas song (https://caitlinhudon.com/2017/12/22/blue-christmas/), Caitlin Hudon

KendRick LamaR (https://davidklaing.com/blog/2017/05/07/kendrick-lamar-data-science.html), David K. Laing

Vilken är Kents mest deprimerande låt? (What is Kent's most depressing song?) (http://dataland.rbind.io/2017/11/07/vilken-%C3%A4r-kents-mest-deprimerande-lat/), Filip Wästberg

Чёрное зеркало Arcade Fire (Black Mirror Arcade Fire) (http://thesociety.ru/arcadefire), TheSociety

Sente-se triste quando ouve “Amar pelos dois”? Não é o único (Do you feel sad when you hear “Love for both?” You’re not alone) (http://rr.sapo.pt/especial/112355/sente-se-triste-quando-ouve-amar-pelos-dois-nao-e-o-unico), Rui Barros, Rádio Renascença

Using Data to Find the Angriest Death Grips Song (https://towardsdatascience.com/angriest-death-grips-data-anger-502168c1c2f0), Evan Oppenheimer

Hierarchical clustering of David Bowie records (https://twitter.com/WireMonkey/status/1009915034246565891?s=19), Alyssa Goldberg

tayloR (https://medium.com/@simranvatsa5/taylor-f656e2a09cc3), Simran Vatsa

Long Distance Calling: Data Science meets Post-Rock… (https://sebastiankuhn.wordpress.com/2017/11/08/r-spotify-part-1-long-distance-calling/), Sebastian Kuhn

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