

SUBSCRIPTION WEEKLY

CONNECTING USERS WITH CONTENT-BASED RECOMMENDATIONS

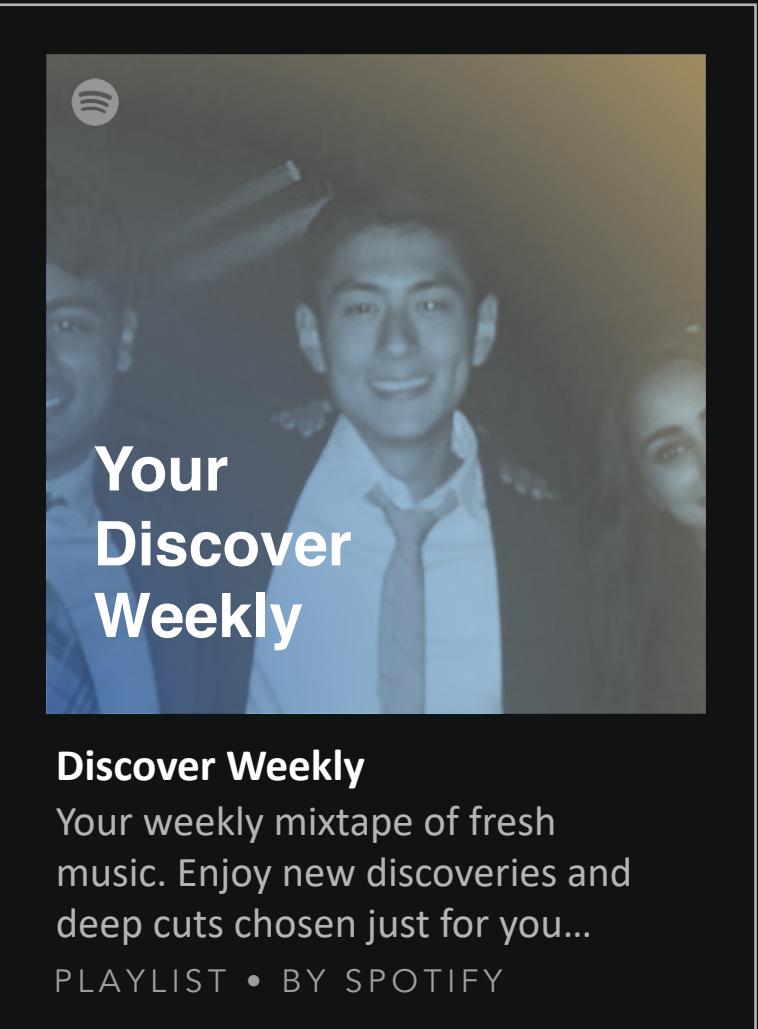
RON QIAO

SPOTIFY

The image is a screenshot of the Spotify mobile application. At the top, there's a navigation bar with three dots on the left, a search bar containing 'Search', and a user profile for 'Ron Qiao' on the right. Below the navigation bar is a 'Focus' section titled 'Music to help you concentrate.' It features three playlists: 'Lo-Fi Beats' (image of a person in headphones), 'Peaceful Piano' (image of a person at a piano), and 'Lava Lamp' (image of a lava lamp). Each playlist has a title, a brief description, and a follower count. Below this is a 'Rock' section with three playlists: 'Rock Classics' (image of The Beatles), '90s Rock Anthems' (image of a person singing), and 'Yacht Rock' (image of a yacht). At the bottom, there's a playback interface showing a song by Rick Astley ('Never Gonna Give You Up') currently playing at 0:02 of 3:32. On the far left, a sidebar lists various sections like Home, Browse, Radio, Songs, Albums, Artists, Stations, Videos, Podcasts, Playlists, and Ron's Entire Library. At the bottom right, there's a 'Friend Activity' feed showing updates from friends like Kevin Qi, Rob Zhao, Sebastian Garcia, Karan Begani, John Quiwa, and David Sherwood.

DISCOVER WEEKLY

SPOTIFY'S COMPETITIVE ADVANTAGE



COLLABORATIVE FILTERING

RECOMMEND SONGS THAT APPEAR FREQUENTLY TOGETHER

USER 1 LIBRARY :



USER 2 LIBRARY :



USER 3 LIBRARY :

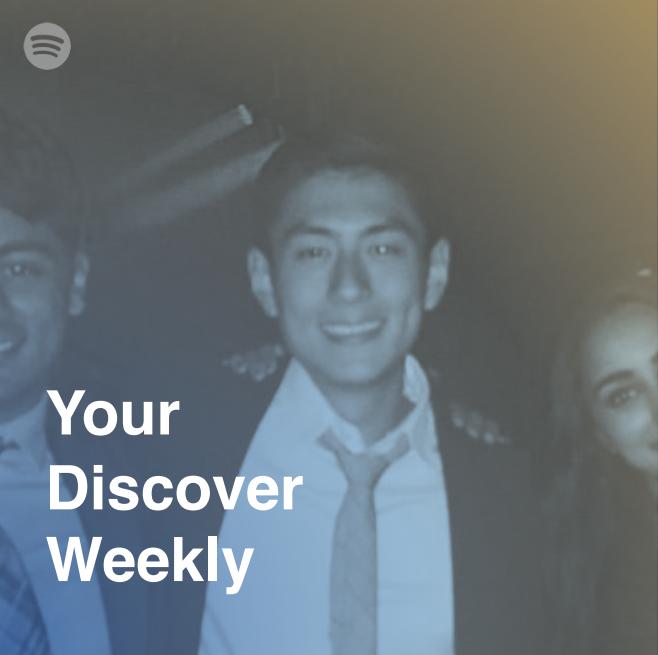


USER 1
DISCOVER WEEKLY :



DISCOVER WEEKLY

SPOTIFY'S COMPETITIVE ADVANTAGE

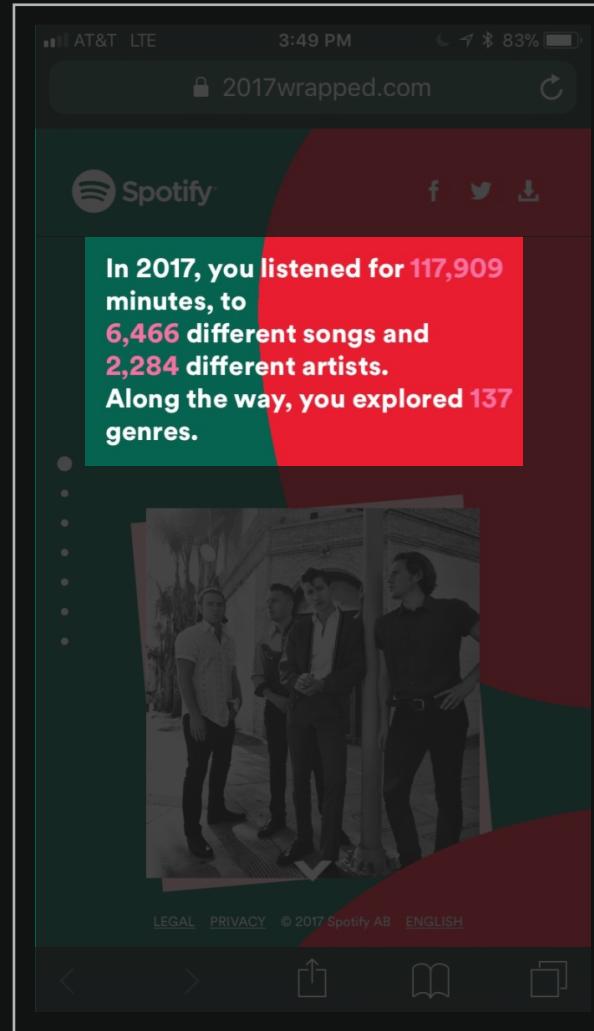


Discover Weekly

Your weekly mixtape of fresh music. Enjoy new discoveries and deep cuts chosen just for you...

PLAYLIST • BY SPOTIFY

COLLABORATIVE FILTERING WORKS REALLY WELL

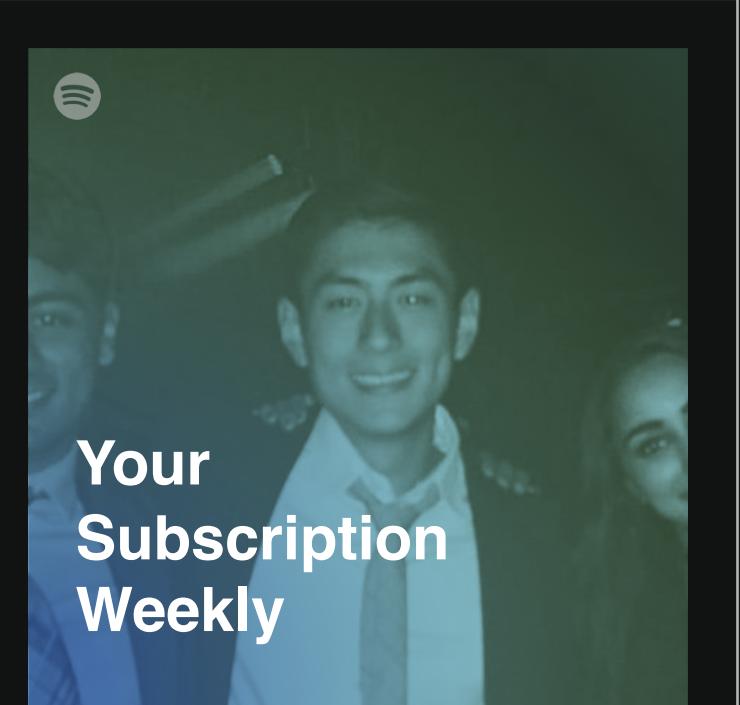


IN 2017
I STREAMED:

- 5.38 hours/day
- 17.71 distinct songs/day
- 6.25 distinct artists/day

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST



Subscription Weekly

Because you think Ron has great taste in music – here are a few tracks from his library...

PLAYLIST • BY SPOTIFY AND RON

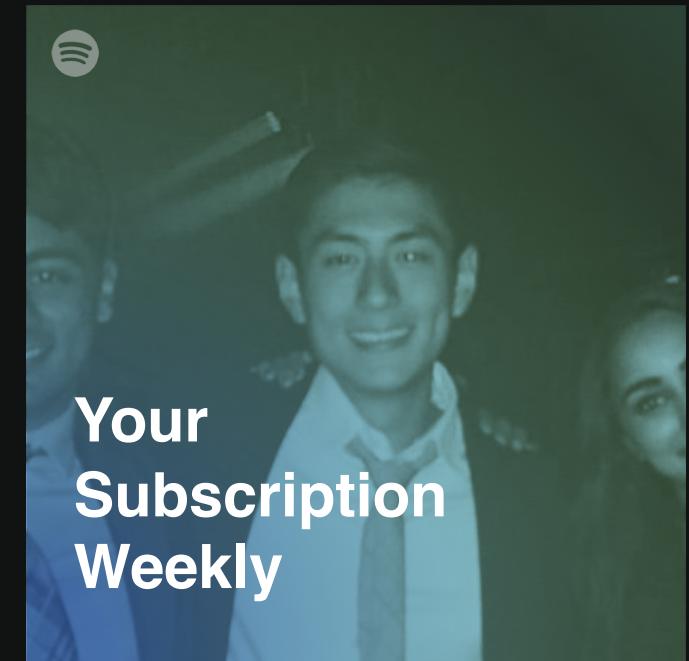
HYBRID RECOMMENDER SYSTEM

COLLABORATIVE FILTERING
ANALYZE USER BEHAVIOR

CONTENT-BASED FILTERING
ANALYZE SONG

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST



Subscription Weekly

Because you think Ron has great taste in music – here are a few tracks from his library...

PLAYLIST • BY SPOTIFY AND RON

HYBRID RECOMMENDER SYSTEM

COLLABORATIVE FILTERING
ANALYZE USER BEHAVIOR

CONTENT-BASED FILTERING
ANALYZE SONG: TEMPO
RHYTHM
STRUCTURE
DURATION
CHORDS
KEY
INSTRUMENTS
GENRE
ETC

LEARN USER BEHAVIOR

STREAM ACTIVITY

Access LastFM API

Pull stream metadata

PLAYLIST COMPOSITION

LASTFM RECORDS EVERY STREAM

TRACK	ARTIST	STREAM DATE
CHUM	EARL SWEATSHIRT	20 JUN 2019, 12:05
NIGHTCALL	KAVINSKY	20 JUN 2019, 12:02
IM NOT IN LOVE	10 CC	20 JUN 2019, 11:57
CHANGE	BLIND MELON	20 JUN 2019, 11:52
SAVED	KHALID	20 JUN 2019, 11:13
OPR	GESAFFELSTEIN	19 JUN 2019, 23:17
FLASHING LIGHTS	KANYE WEST	19 JUN 2019, 23:12
NIGHT	JIMI HENDRIX	19 JUN 2019, 16:34
TRUE	SPANDAU BALLET	19 JUN 2019, 16:31
THE TROOPER	IRON MAIDEN	19 JUN 2019, 12:05
STILL BEATING	MAC DEMARCO	19 JUN 2019, 12:02

LEARN USER BEHAVIOR

STREAM ACTIVITY

Access LastFM API

Pull stream metadata

PLAYLIST COMPOSITION

LASTFM RECORDS EVERY STREAM

TRACK	ARTIST	STREAM DATE
LITTLE WING	JIMI HENDRIX	28 NOV 2018, 17:46
LITTLE WING	JIMI HENDRIX	21 NOV 2018, 12:20
LITTLE WING	JIMI HENDRIX	09 OCT 2018, 13:39
LITTLE WING	JIMI HENDRIX	02 SEP 2018, 08:34
LITTLE WING	JIMI HENDRIX	08 APR 2018, 20:46

TOP TRACKS IN 2018

TRACK	ARTIST	STREAM COUNT
EASY	COMMODORES	167
LITTLE WING	JIMI HENDRIX	124
UNDER CONTROL	THE STROKES	124
OLD MAN	NEIL YOUNG	103

LEARN USER BEHAVIOR

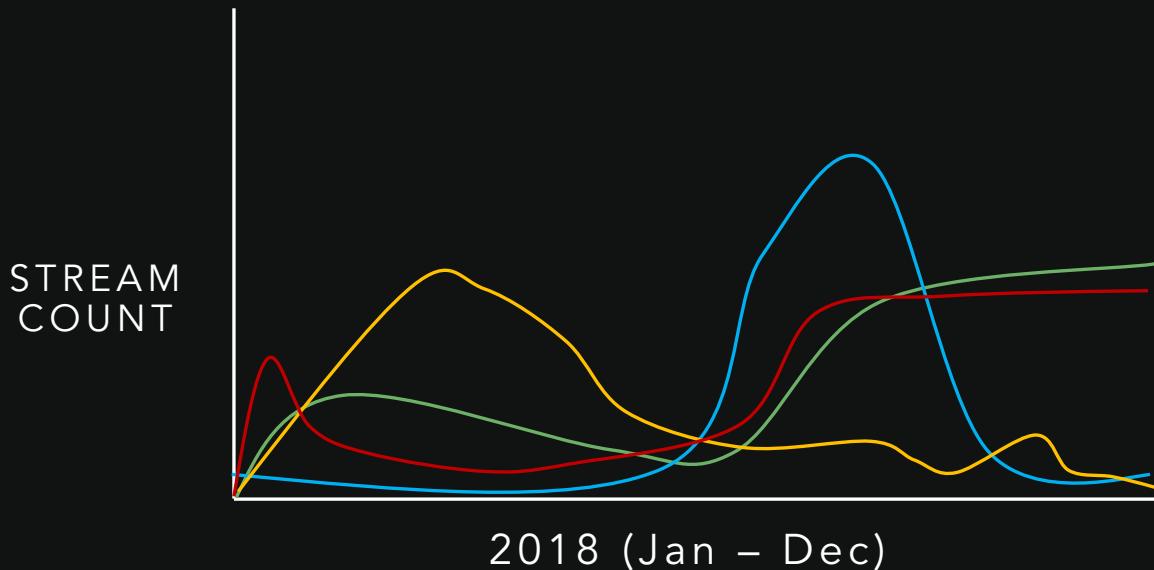
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LASTFM RECORDS EVERY STREAM



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LITTLE WING	JIMI HENDRIX	124
UNDER CONTROL	THE STROKES	124
OLD MAN	NEIL YOUNG	103

LEARN USER BEHAVIOR

STREAM ACTIVITY

Access LastFM API

Pull stream metadata

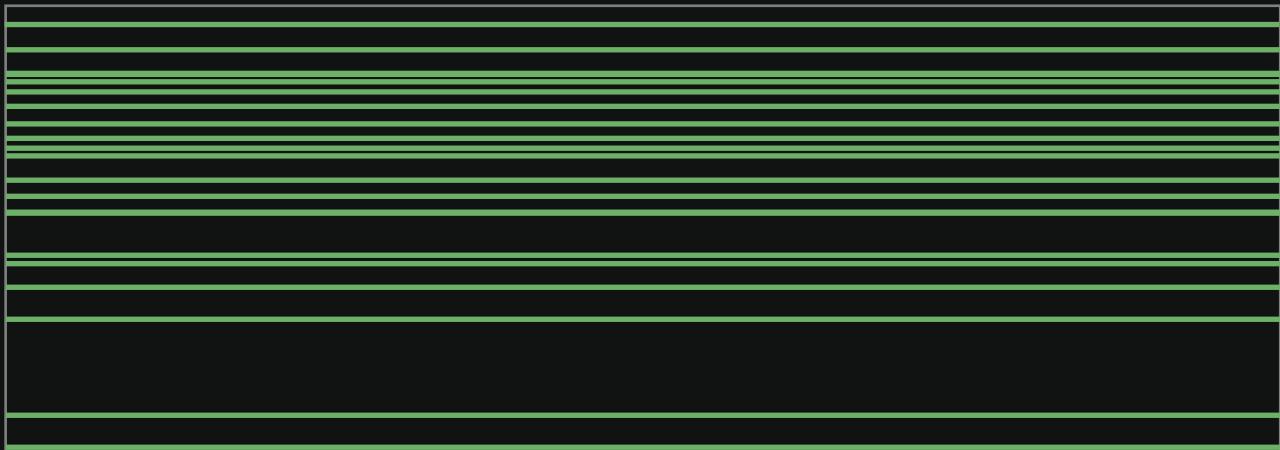
↓ ↓

PLAYLIST COMPOSITION

Access Spotify API

Pull user playlists, tracks

SONGS THAT APPEAR FREQUENTLY SIGNAL A STRONG PREFERENCE



TOTAL PLAYLISTS: 54

TRACK	ARTIST	PLAYLIST COUNT
LITTLE WING	JIMI HENDRIX	15
SOLAR DETROIT	MACEO PLEX	14
PHOTOGRAPH	NICKELBACK	1

LEARN USER BEHAVIOR

STREAM ACTIVITY

Access LastFM API

Pull stream metadata

PLAYLIST COMPOSITION

Access Spotify API

Pull user playlists, tracks

SONGS THAT APPEAR FREQUENTLY SIGNAL A STRONG PREFERENCE

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PHOTOGRAPH	NICKELBACK	1

CONTENT-BASED FILTERING

AVAILABLE DATA

DATA SOURCE

+ Lyrics

Genius API
WikiLyrics API

+ Spotify Audio
Features

+ MP3 Audio Files

CONTENT-BASED FILTERING

AVAILABLE DATA	DATA SOURCE	MODEL / ALGORITHM
+ Lyrics	Genius API WikiLyrics API	Topic Modeling With Non-negative Matrix Factorization Word Embeddings with Word2Vec
+ Spotify Audio Features		
+ MP3 Audio Files		

CONTENT-BASED FILTERING

AVAILABLE DATA	DATA SOURCE	MODEL / ALGORITHM
+ Lyrics	Genius API WikiLyrics API	Topic Modeling With Non-negative Matrix Factorization Word Embeddings with Word2Vec
+ Spotify Audio Features	Spotify API	Euclidean Distance With Normalized Audio Features
+ MP3 Audio Files		

CONTENT-BASED FILTERING

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+ Lyrics	Genius API WikiLyrics API	Topic Modeling With Non-negative Matrix Factorization Word Embeddings with Word2Vec
+ Spotify Audio Features	Spotify API	Euclidean Distance With Normalized Audio Features
+ MP3 Audio Files	Spotify Song Preview	Convolutional Neural Network Autoencoder

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RECOMMENDATIONS

CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

CAPTURING SIMILARITY IN LYRICS WITH NMF AND WORD2VEC

LYRICS - ORIGINAL

I should have never ever,
Ever made you cry
And girl since, since you been gone
Dont'cha know I sit around
With my head hangin' down
And I wonder, who's lovin' you

WHO'S LOVIN' YOU
THE JACKSON 5



CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

CAPTURING SIMILARITY IN LYRICS WITH NMF AND WORD2VEC

LYRICS - ORIGINAL

I should have never ever,
Ever made you cry
And girl since, since you been gone
Dont'cha know I sit around
With my head hangin' down
And I wonder, who's lovin' you

LYRICS - PROCESSED

```
['i', 'never', 'ever', 'ever', 'made', 'cry',  
'and', 'girl', 'since', 'since', 'gone',  
'know', 'i', 'sit', 'around', 'with', 'head',  
'hangin', 'And', 'i', 'wonder', 'lovin']
```

WHO'S LOVIN' YOU
THE JACKSON 5



CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

MP3 FILES

CAPTURING SIMILARITY IN LYRICS WITH NMF AND WORD2VEC

INPUT LYRICS

I should have never ever,
Ever made you cry
And girl since, since you been gone
Dont'cha know I sit around
With my head hangin' down
And I wonder, who's lovin' you

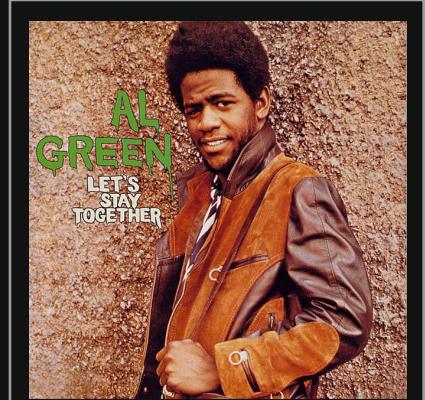
RECOMMENDATION

And how can you mend this broken man?
How can a loser ever win?
Please help me mend my broken heart
And let me live again

WHO'S LOVIN' YOU THE JACKSON 5



HOW CAN YOU MEND A BROKEN HEART
AL GREEN



CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

MP3 FILES

CAPTURING SIMILARITY IN LYRICS WITH NMF AND WORD2VEC

INPUT LYRICS

I should have never ever,
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Dont'cha know I sit around
With my head hangin' down
And I wonder, who's lovin' you

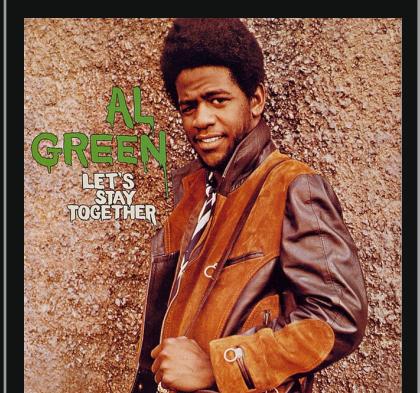
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How can a loser ever win?
Please help me mend my broken heart
And let me live again

WHO'S LOVIN' YOU THE JACKSON 5



HOW CAN YOU MEND A BROKEN HEART
AL GREEN



CONTENT
SIMILARITY

SONG DATA

LYRICS

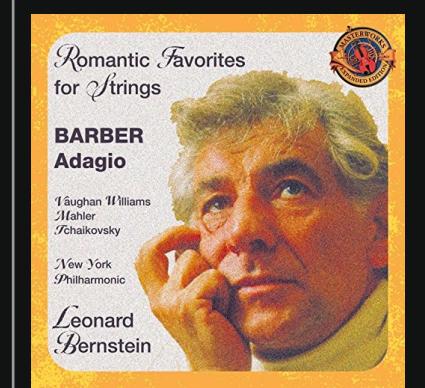
SPOTIFY
AUDIO
FEATURES

MP3 FILES

CAPTURING SIMILARITY IN LYRICS WITH NMF AND WORD2VEC

INPUT LYRICS: (Instrumental)

ADAGIO FOR STRINGS
SAMUEL BARBER



CONTENT
SIMILARITY
SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

SPOTIFY/ECHONEST AUDIO FEATURES PROVIDE INFORMATION ON TRACK CONTENT

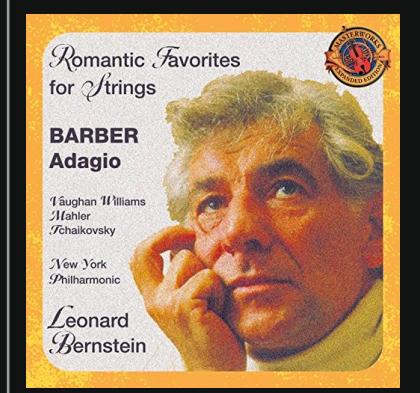
INPUT LYRICS: (Instrumental)

TEMPO: 86.0

DURATION: 9:56

LOUDNESS: -20.431

ADAGIO FOR STRINGS
SAMUEL BARBER



CONTENT
SIMILARITY

SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

SPOTIFY/ECHONEST AUDIO FEATURES PROVIDE INFORMATION ON TRACK CONTENT

INPUT LYRICS: (Instrumental)

TEMPO: 86.0

DURATION: 9:56

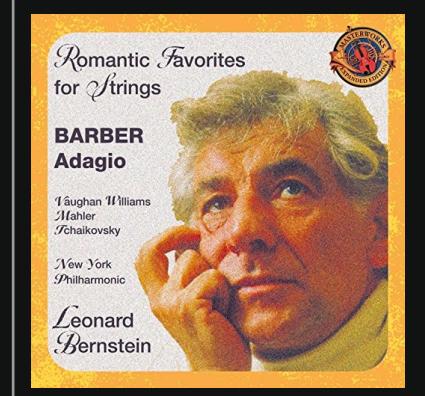
LOUDNESS: -20.431

ACOUSTICNESS: 0.912

ENERGY: 0.0865

VALENCE: 0.0298

ADAGIO FOR STRINGS
SAMUEL BARBER



CONTENT
SIMILARITY
SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

SPOTIFY/ECHONEST AUDIO FEATURES PROVIDE INFORMATION ON TRACK CONTENT

TEMPO: 86.0

DURATION: 9:56

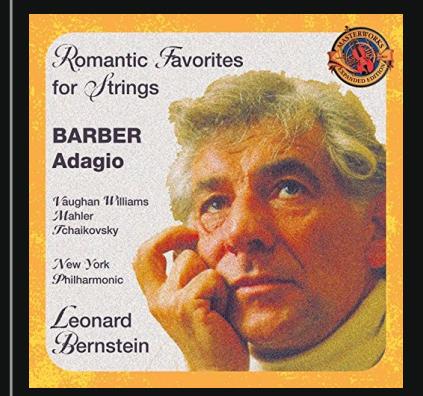
LOUDNESS: 46.4

ACOUSTICNESS: 91.6

ENERGY: 08.4

VALENCE: 01.1

ADAGIO FOR STRINGS
SAMUEL BARBER



CONTENT
SIMILARITY
SONG DATA

LYRICS

TEMPO: 86.0 101.0

DURATION: 9:56 4:15

LOUDNESS: 46.4 90.1

SPOTIFY
AUDIO
FEATURES

ACOUSTICNESS: 91.6 00.6

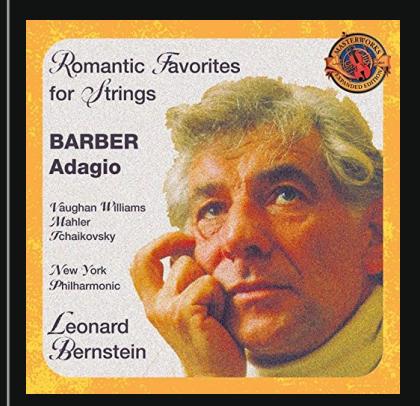
ENERGY: 08.4 98.2

VALENCE: 01.1 72.1

MP3 FILES

SPOTIFY/ECHONEST AUDIO FEATURES
PROVIDE INFORMATION ON TRACK CONTENT

ADAGIO FOR STRINGS
SAMUEL BARBER



B.Y.O.B.
SYSTEM OF A DOWN



CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

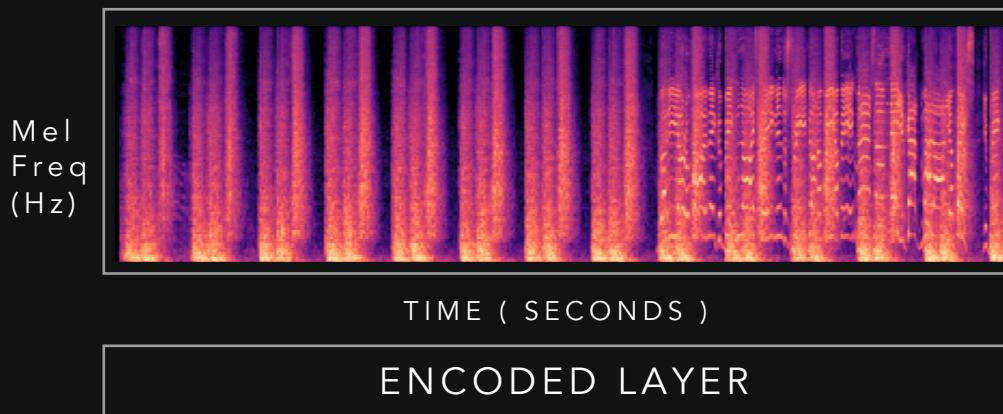
MP3 FILES

CONVOLUTIONAL NEURAL NETWORK (CNN) AUTOENCODER

MODEL STEPS

1. PULL AND STORE MP3s
2. FOURIER TRANSFORM MP3 / CONVERT TO MEL SPECTROGRAM
3. TRAIN CNN AUTOENCODER (AWS P2.8 INSTANCE) ON ALL IMAGES

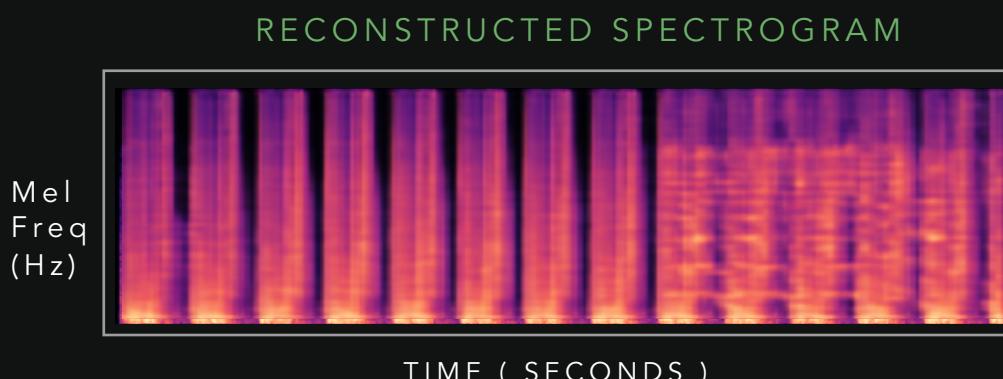
QUEEN – WE WILL ROCK YOU (INTRO)



ORIGINAL IMAGE

$432 \times 288 \times 3 = 373,248$ FEATURES

$36 \times 54 \times 16 = 31,104$ FEATURES



DECODED IMAGE

$432 \times 288 \times 3 = 373,248$ FEATURES

CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

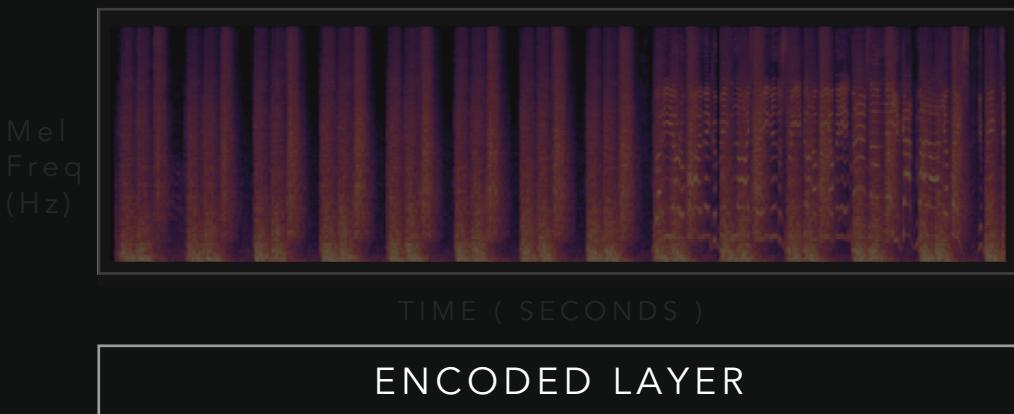
MP3 FILES

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QUEEN – WE WILL ROCK YOU (INTRO)

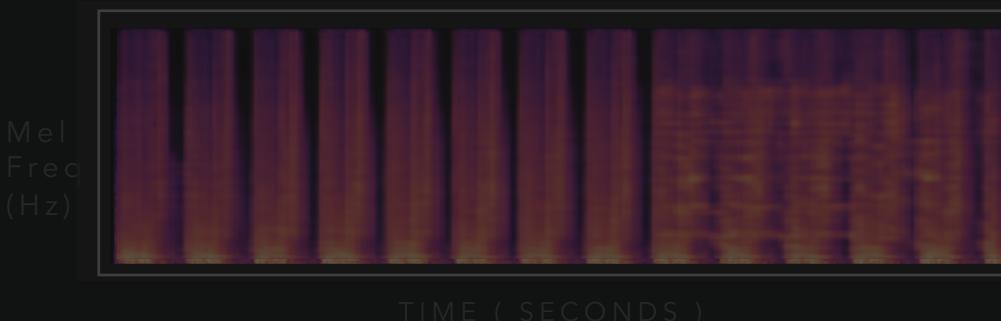


ORIGINAL IMAGE

$432 \times 288 \times 3 =$
373,248 FEATURES

$36 \times 54 \times 16 =$
31,104 FEATURES

RECONSTRUCTED SPECTROGRAM



DECODED IMAGE

$432 \times 288 \times 3 =$
373,248 FEATURES

CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

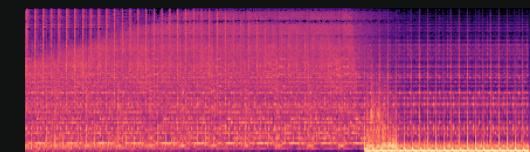
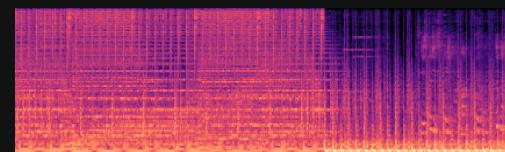
MP3 FILES

CONVOLUTIONAL NEURAL NETWORK (CNN) AUTOENCODER

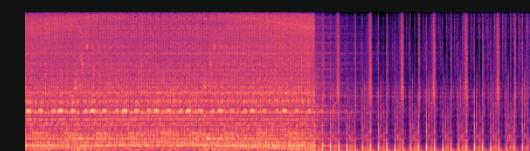
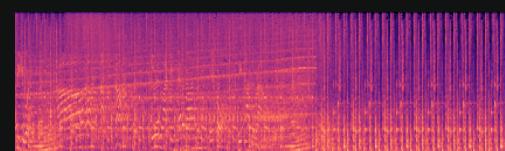
MODEL STEPS

1. PULL AND STORE MP3s
2. FOURIER TRANSFORM MP3 / CONVERT TO MEL SPECTROGRAM
3. TRAIN CNN AUTOENCODER (AWS P2.8 INSTANCE) ON ALL IMAGES
4. FEED LIBRARY THROUGH LEARNED ENCODED LAYER
5. TRANSFORM INPUT WITH ENCODED LAYER
6. CALCULATE COSINE SIMILARITY

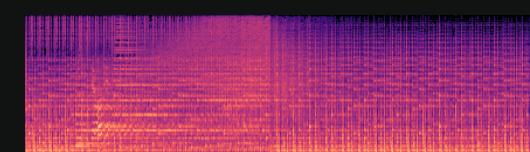
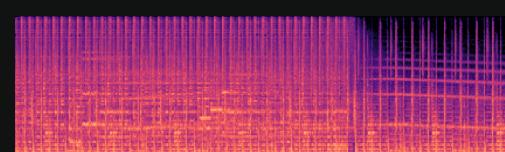
3,083 SPECTROGRAMS



ENCODED LAYER



INPUT



CONTENT
SIMILARITY

SONG DATA

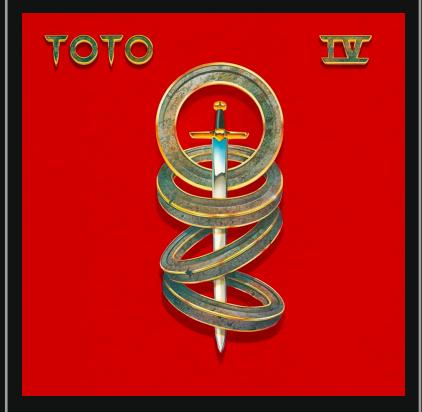
LYRICS

SPOTIFY
AUDIO
FEATURES

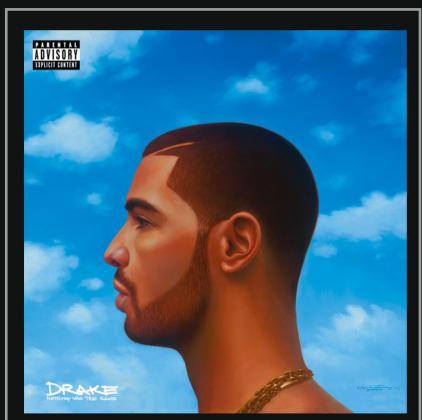
MP3 FILES

PUTTING IT ALL TOGETHER

AFRICA
TOTO



HOLD ON, WE'RE GOING HOME
DRAKE



CONTENT
SIMILARITY
SONG DATA

LYRICS

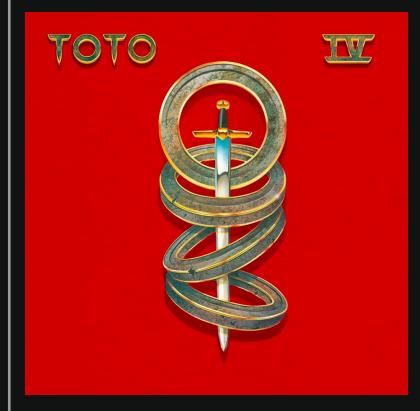
SPOTIFY
AUDIO
FEATURES

MP3 FILES

PUTTING IT ALL TOGETHER

It's gonna take a lot to drag me away from you
There's nothing that a hundred men
or more could ever do
I bless the rains down in Africa
Gonna take some time to do the things we never
had (ooh, ooh)

AFRICA
TOTO



HOLD ON, WE'RE GOING HOME
DRAKE

I got my eyes on you
You're everything that I see
I want your hot love and emotion endlessly
I can't get over you
You left your mark on me
I want your hot love and emotion endlessly



CONTENT
SIMILARITY
SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

PUTTING IT ALL TOGETHER

It's gonna take a lot to drag me away from you
There's nothing that a hundred men
or more could ever do

LOUDNESS: 52.3 | 78.4

LIVENESS: 03.1 | 05.6

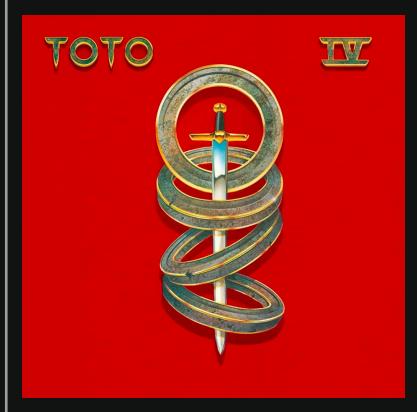
ACOUSTICNESS: 25.8 | 00.0

ENERGY: 37.2 | 41.2

DANCEABILITY: 66.1 | 77.6

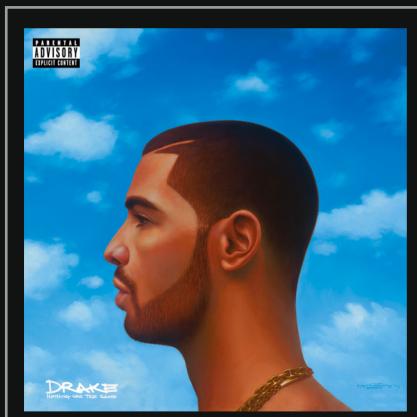
VALENCE: 73.8 | 27.8

AFRICA
TOTO



HOLD ON, WE'RE GOING HOME
DRAKE

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You're everything that I see
I want your hot love and emotion endlessly
I can't get over you
You left your mark on me
I want your hot love and emotion endlessly



CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

MP3 FILES

PUTTING IT ALL TOGETHER

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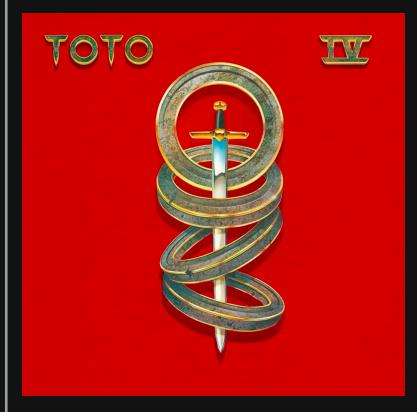
ACOUSTICNESS: 25.8 | 00.0

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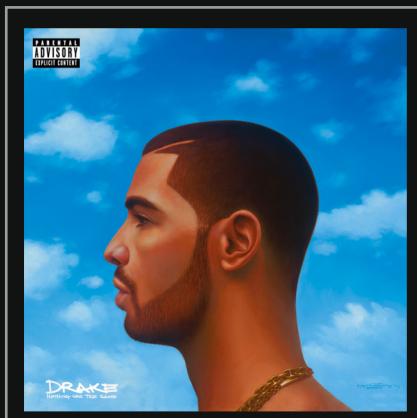
VALENCE: 73.8 | 27.8

AFRICA
TOTO



HOLD ON, WE'RE GOING HOME
DRAKE

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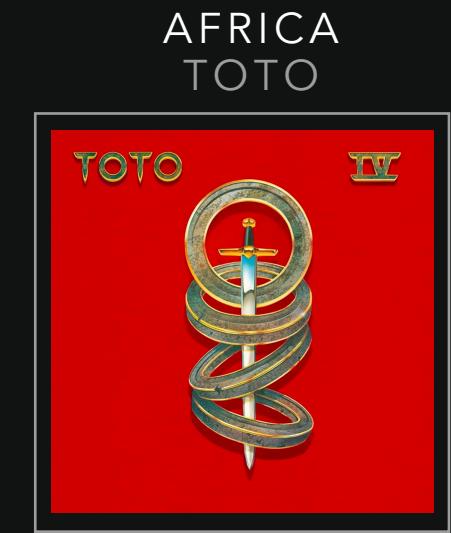
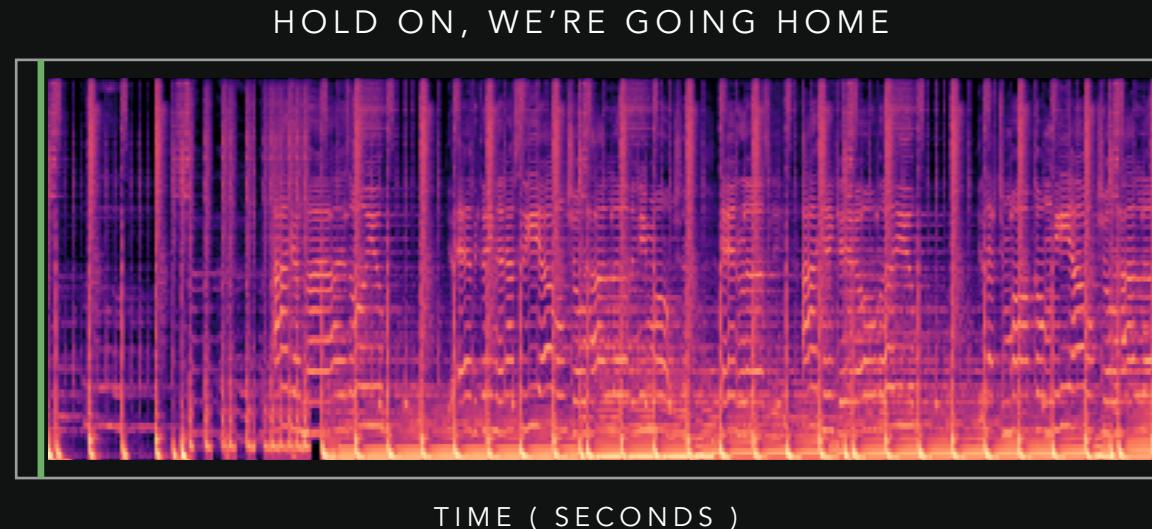


CONTENT
SIMILARITY
SONG DATA

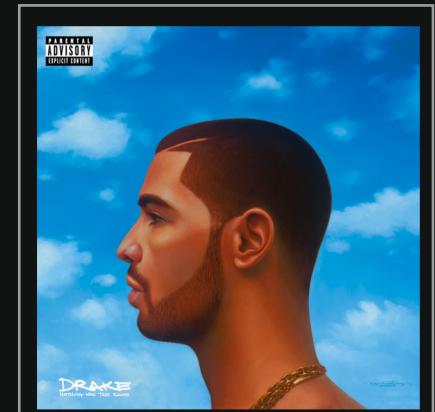
LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES



HOLD ON, WE'RE GOING HOME
DRAKE



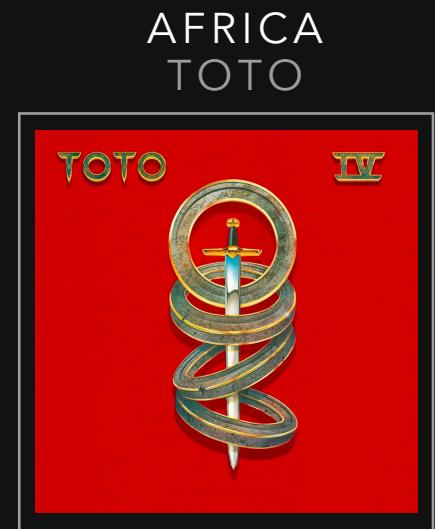
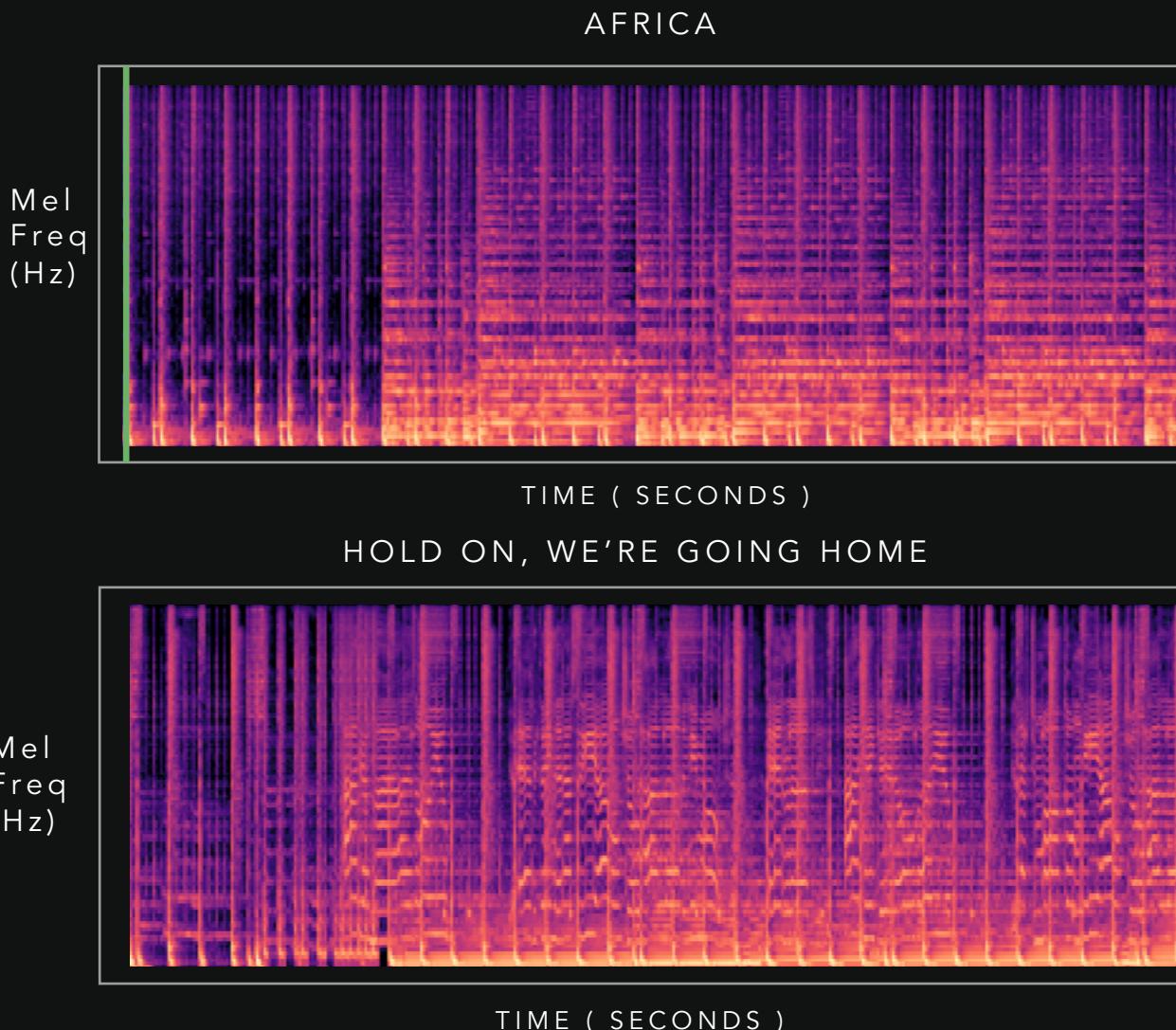
CONTENT SIMILARITY

SONG DATA

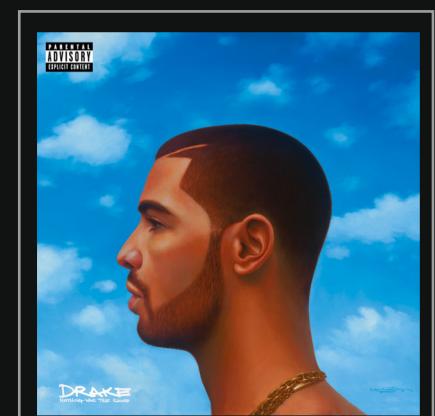
LYRICS

SPOTIFY AUDIO FEATURES

MP3 FILES



HOLD ON, WE'RE GOING HOME
DRAKE



CONTENT SIMILARITY

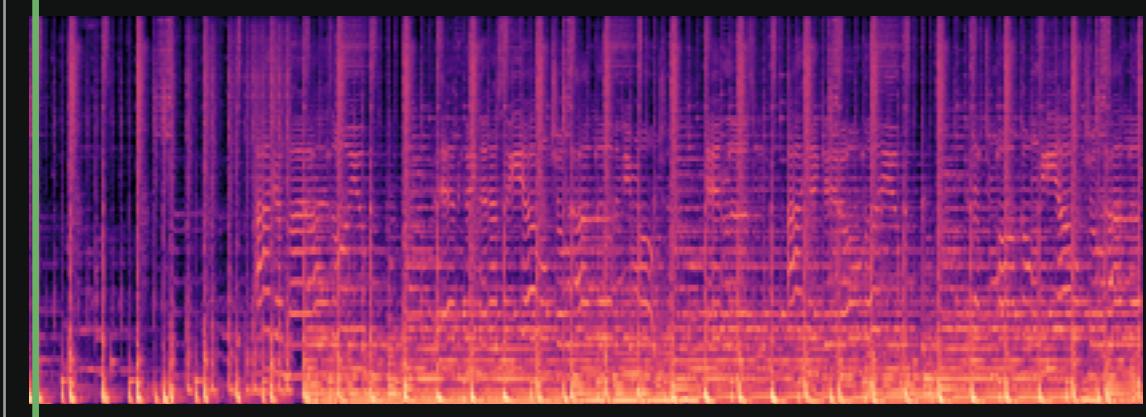
SONG DATA

LYRICS

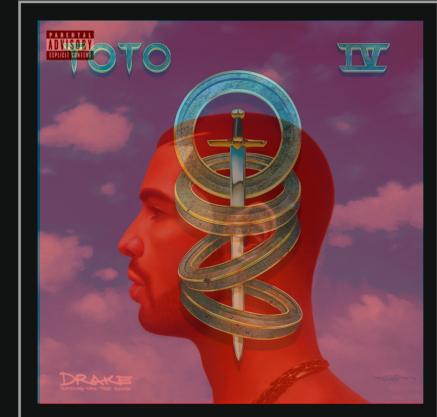
SPOTIFY AUDIO FEATURES

SUBSCRIPTION WEEKLY CAPTURES CONTENT – RHYTHM

Mel
Freq
(Hz)



TOTO + DRAKE



MP3 FILES

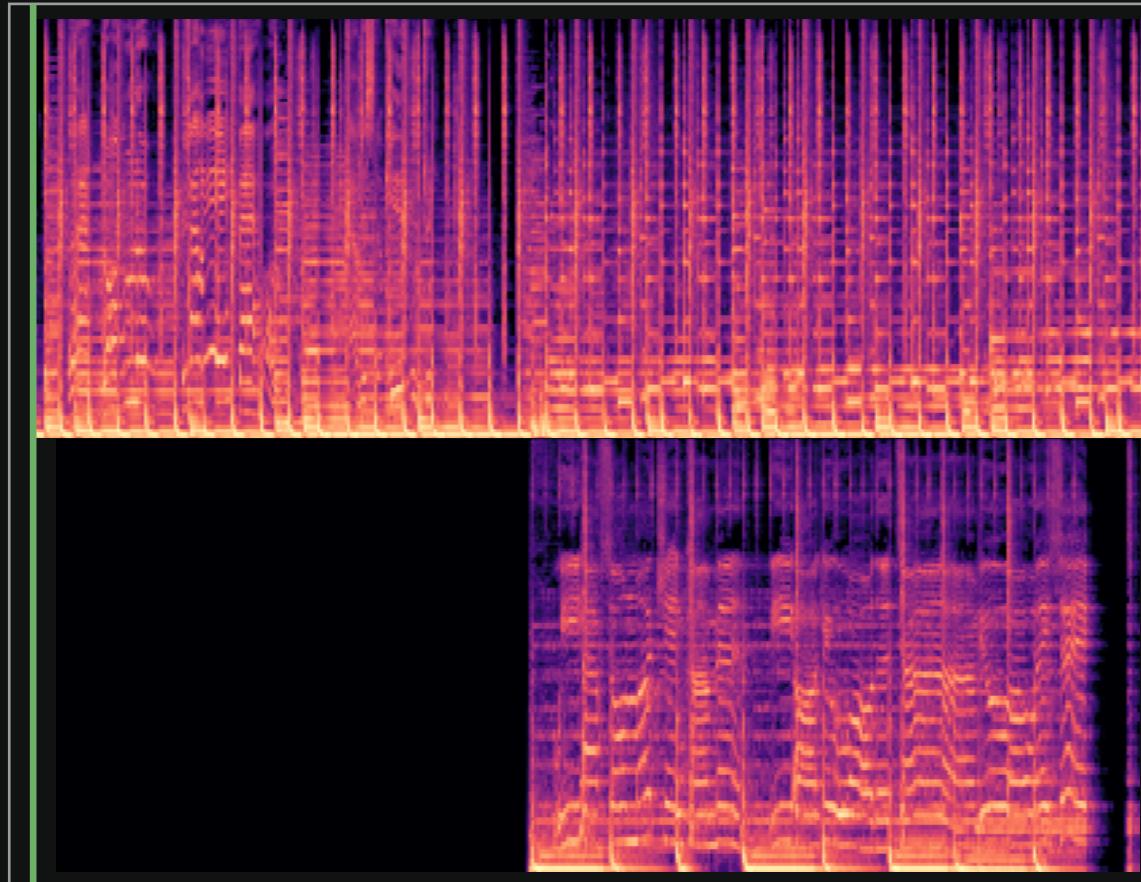
CONTENT
SIMILARITY
SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

SUBSCRIPTION WEEKLY CAPTURES VOCAL SIMILARITIES



DREAM
AUTOGRAF



YOUNG DUMB & BROKE
KHALID



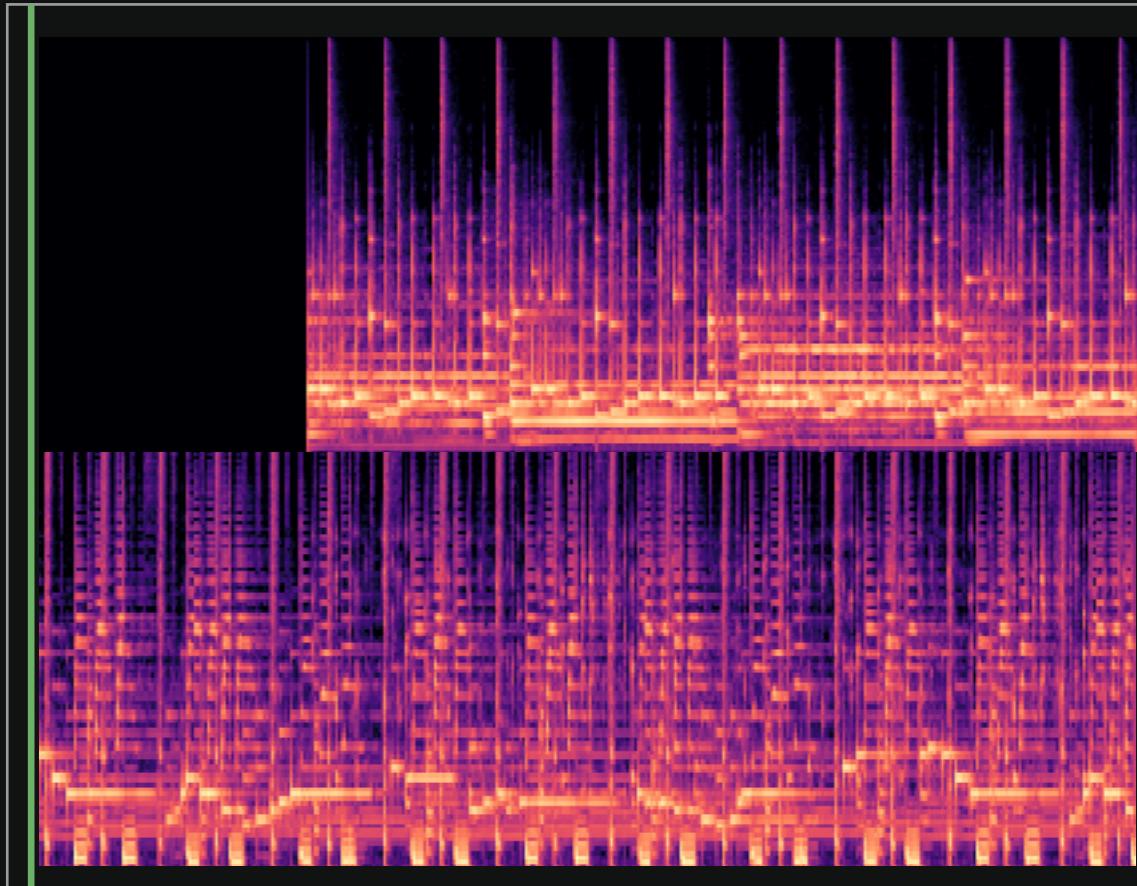
CONTENT
SIMILARITY
SONG DATA

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

SUBSCRIPTION WEEKLY CAPTURES
THE SAME KEY (D Minor)



DREAM
AUTOGRAF



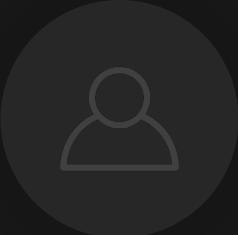
SOMETHING ABOUT US
DAFT PUNK



SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE



user30833
102 FOLLOWERS
20 SUBSCRIBERS
[SUBSCRIBE](#)

☊ USER30833'S LIBRARY

♫ PLAYLISTS: 94

◎ UNIQUE TRACKS: 7,834

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE



DONALD GLOVER 

72,384 FOLLOWERS
2,349 SUBSCRIBERS

[SUBSCRIBE](#)

 DONALD'S LIBRARY

 PLAYLISTS: 32

 UNIQUE TRACKS: 2,382

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE



RON QIAO

89 FOLLOWERS
2 SUBSCRIBERS

[SUBSCRIBE](#)

☊ RON'S LIBRARY

♫ PLAYLISTS: 54

◎ UNIQUE TRACKS: 3,083

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE
2. SUBSCRIBE



RON QIAO

89 FOLLOWERS
3 SUBSCRIBERS

SUBSCRIBED

☊ RON'S LIBRARY

♫ PLAYLISTS: 54

◎ UNIQUE TRACKS: 3,083

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE
2. SUBSCRIBE
3. RECEIVE PLAYLIST



RON QIAO

89 FOLLOWERS
3 SUBSCRIBERS

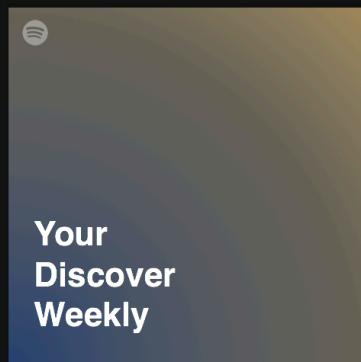
SUBSCRIBED

RON'S LIBRARY

PLAYLISTS: 54

UNIQUE TRACKS: 3,083

Discover new music

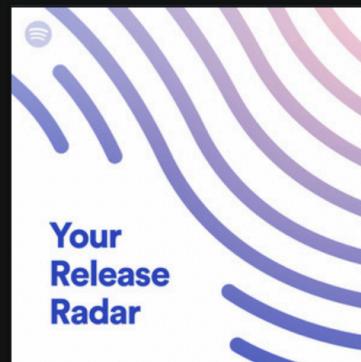


Your
Discover
Weekly

Discover Weekly

Your weekly mixtape of fresh music. Enjoy new discoveries and deep cuts chosen just for you...

PLAYLIST • BY SPOTIFY

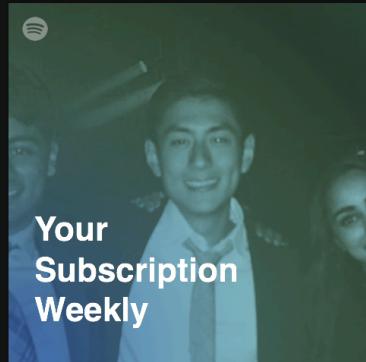


Your
Release
Radar

Release Radar

Never miss a new release! Catch all the latest music from artists you follow, plus new singles

PLAYLIST • BY SPOTIFY



Your
Subscription
Weekly

Subscription Weekly
Because you think Ron has great taste in music – here are a few tracks from his library...

PLAYLIST • BY SPOTIFY AND RON

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

1. FIND A USER YOU LIKE
2. SUBSCRIBE
3. RECEIVE PLAYLIST



RON QIAO

89 FOLLOWERS
3 SUBSCRIBERS

SUBSCRIBED

RON'S LIBRARY

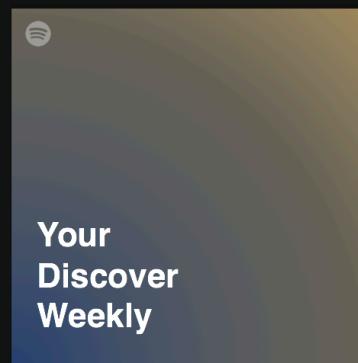
PLAYLISTS: 54

UNIQUE TRACKS: 3,083

HANDPICKED FROM
3,083 UNIQUE TRACKS

COLLABORATIVE FILTERING
CONTENT-BASED FILTERING

Discover new music

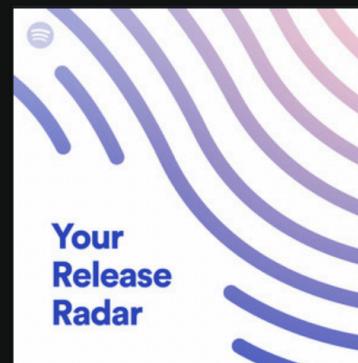


Your
Discover
Weekly

Discover Weekly

Your weekly mixtape of fresh music. Enjoy new discoveries and deep cuts chosen just for you...

PLAYLIST • BY SPOTIFY

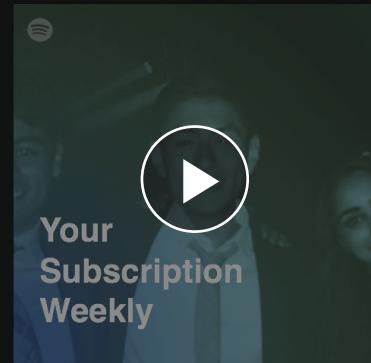


Your
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Radar

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PLAYLIST • BY SPOTIFY



Your
Subscription
Weekly

Subscription Weekly
Because you think Ron has great taste in music – here are a few tracks from his library...

PLAYLIST • BY SPOTIFY AND RON

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

PLAYLISTS

- Genre ►
- Activity ►
- Memories ►
- Seasons ►
- Miscellaneous ►
- Spotify Curated ►
- Ron's Recommendations

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

PLAYLISTS

Genre

Activity

Memories

Seasons

Miscellaneous

Spotify Curated

Ron's Recommendations



PLAYLIST

Morning Run 150–165 BPM

Start the day with a morning run together with these easy and joyful tracks.

Created by Spotify • 49 songs, 2 hr 55 min

PLAY

FOLLOW

...

Filter

TITLE	ARTIST	ALBUM
+ Never Forget You	Zara Larsson, MNEK	Never Forget You
+ What You Know	Two Door Cinema Club	Tourist History
+ War Paint (Young Bombs Remix)	FLETCHER	War Paint (Young Bombs R...
+ Burn	Ellie Goulding	Halcyon Days
+ Brother (feat. Gavin DeGraw)	NEEDTOBREATHE, Gavin ...	Brother

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

PLAYLISTS

- Genre ►
- Activity ►
- Memories** ►
- Seasons ►
- Miscellaneous ►
- Spotify Curated ►
- Ron's Recommendations



PLAYLIST

lisbon

Created by Ron Qiao • 24 songs, 1 hr 42 min

PLAY ⋮

Filter

TITLE	ARTIST	ALBUM
+ Modern Girls & Old Fashion Men	The Strokes, Regina Spektor	Modern Girls & Old Fashio...
+ No Quarter - Rough Mix with JPJ Keyboard Overd...	Led Zeppelin	Houses Of The Holy (Delux...
+ Change Your Mind	The Killers	Hot Fuss
+ Everything Will Be Alright	The Killers	Hot Fuss
+ So American	Portugal. The Man	In The Mountain In The Clo...
+ Ain't No Love In the Heart of the City	Bobby "Blue" Bland	Ain't No Love In The Heart ...
✓ All These Things That I've Done	The Killers	Hot Fuss

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST

PLAYLISTS

- Genre ►
- Activity ►
- Memories ►
- Seasons ►
- Miscellaneous ►
- Spotify Curated ►
- Ron's Recommendations



PLAYLIST

spring 2019

Created by Ron Qiao • 67 songs, 5 hr

PLAY



Q Filter

TITLE	ARTIST	ALBUM
+ Sonate pacifique	L'Impératrice	Sonate pacifique - EP
+ Can't Believe The Way We Flow	James Blake	Assume Form
+ Hallowed Be Thy Name - 2015 Remaster	Iron Maiden	The Number of the Beast (2...
+ Raining Blood	Slayer	Reign In Blood
+ God Only Knows	High Contrast	God Only Knows
+ Love Of My Life - Remastered 2011	Queen	A Night At The Opera (Delu...
+ Your Love	The Outfield	Play Deep
+ Apolune	Jesper Ryom	Aviator EP

SUBSCRIPTION WEEKLY

A NEW RECOMMENDED PLAYLIST



RON QIAO

89 FOLLOWERS
3 SUBSCRIBERS

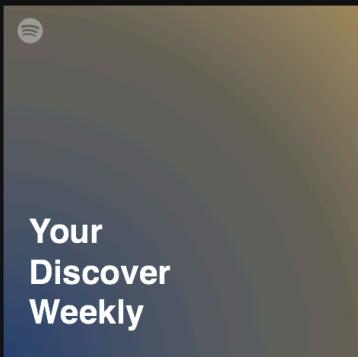
SUBSCRIBED

RON'S LIBRARY

PLAYLISTS: 54

UNIQUE TRACKS: 3,083

Discover new music

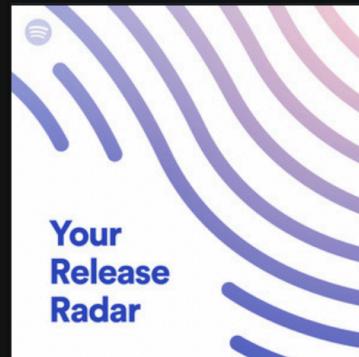


Your
Discover
Weekly

Discover Weekly

Your weekly mixtape of fresh music. Enjoy new discoveries and deep cuts chosen just for you...

PLAYLIST • BY SPOTIFY



Your
Release
Radar

Release Radar

Never miss a new release! Catch all the latest music from artists you follow, plus new singles

PLAYLIST • BY SPOTIFY



Your
Subscription
Weekly

Subscription Weekly
Because you think Ron has great taste in music – here are a few tracks from his library...

PLAYLIST • BY SPOTIFY AND RON

APPENDIX

CONVERT MP3 TO MEL SPECTROGRAMS (IMAGES)

SONG DATA

MP3 FILE

LYRICS

SPOTIFY
AUDIO
FEATURES

MP3 FILES

CONTENT SIMILARITY

SONG DATA

LYRICS

SPOTIFY AUDIO FEATURES

MP3 FILES

CONVERT MP3 TO MEL SPECTROGRAMS (IMAGES)

MP3 FILE

MEL SPECTROGRAM

Mel
Freq
(Hz)

0

1

2

3

4

5

TIME (SECONDS)

