

*un-signed, un-labeled*

# un- dazzled

*an inverse music recommendation system*

# the problem about big streaming apps

| When a search is requested, main stream artists from big labels are the top results

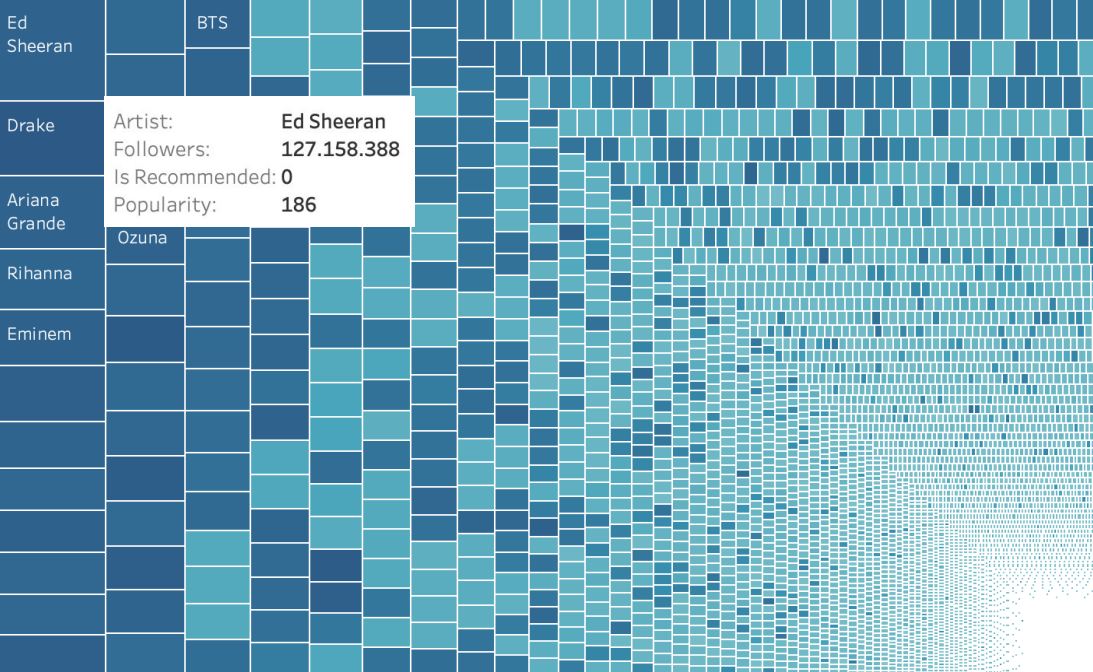
| Recommendation is based on what the majority listens and likes

| there seem to be too many options of songs, genres, artists ...

| ... and thousands of playlists, with thousand of names

**4350  
UNIQUE  
GENRES  
(2020)**

**amateurs  
become part of  
one hell of a net,  
just a little dazzled**



## THE USUAL APPROACH

## #1 collaborative filter

## #2 *natural language processing*

### #3 *raw audio model*

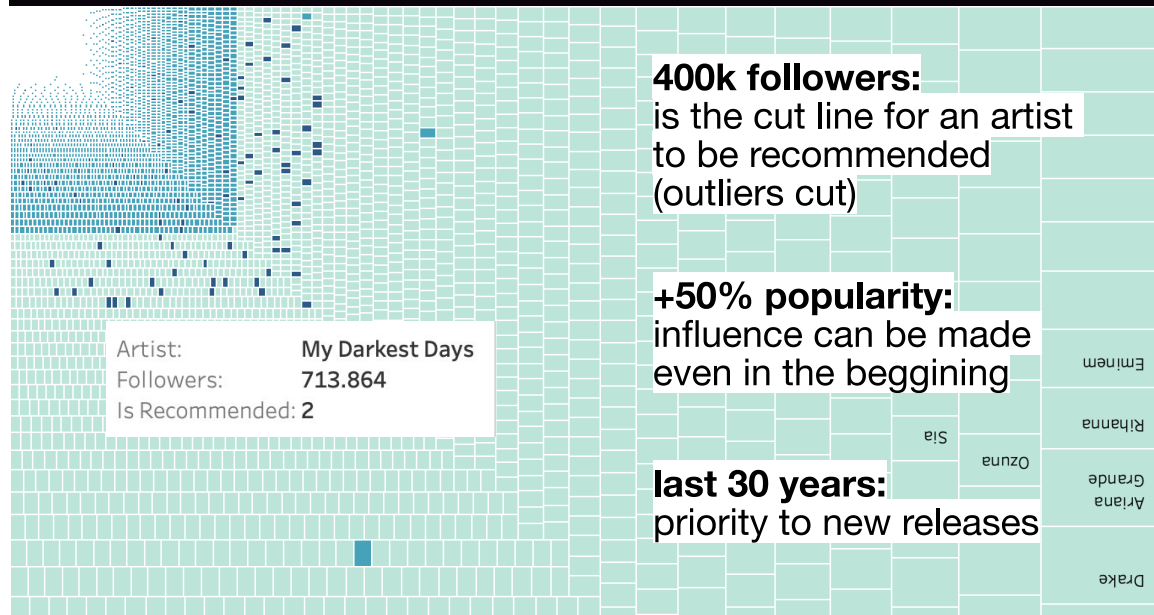
source: [hackernoon.com/spotify-s-discover-weekly-how-machine-learning-finds-your-new-music-19a41ab76efe](https://hackernoon.com/spotify-s-discover-weekly-how-machine-learning-finds-your-new-music-19a41ab76efe)

# A DIFFERENT APPROACH

## #1 content based filter features of the songs

## #2 search in the same un-equal way: filtering out who's seen too much

### #3 *natural language processing in underground media*



## DATABASE

- | Spotify
- | Billboard
- | Chartmetrics
- | Everynoise
- | Kaggle dataset
- | API
- | Web Scrapping

## INPUT

- | Song title
- | Artist name
- | Speech recognition
- | Written input
- | Text validation (levenshtein dist)

## PROCESS *pipeline*

- | Data clean
- | Standardize
- | Features analysis and selection
- | Clustering
- | Filtering by target
- | Recommendation System
  - Ball tree
  - 1: all from cluster
  - Bring nearest based on nlp analysis (cosine dist)
- | Refresh database

## OUTPUT

- | Top 5 Similar Songs recommendation from less known artists
  - Artist Name
  - Album Name
  - Track Name
  - Album Picture
  - Link to song
- | Deploy

DATABASE

| songs

| artists

Spotify  
Billboard  
Chartmetrics  
Everynoise  
Kaggle dataset

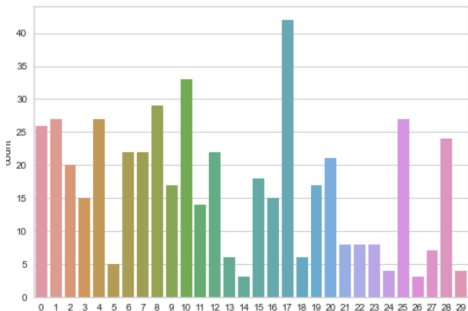
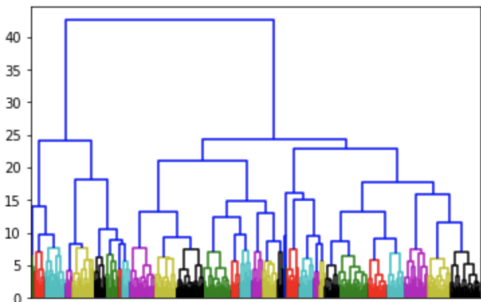
| API  
Web Scrapping

- Artist (str)
- Song track (str)
- Artist genre
- Features
- Track ID
- Track Popularity

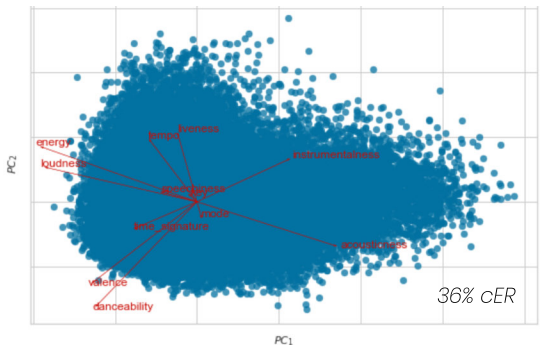
- Artist Name
- Artist ID
- Artist Genre
- Spotify\_popularity
- Spotify\_followers
- Spotify monthly listeners
- Spotify listeners/ followers
- Youtube subscribers
- Instagram subscribers

# Clustering: Agglomerative x Kmeans

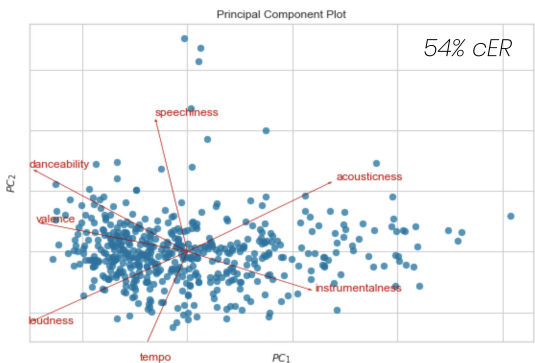
## Clustering without considering genre labels



## Features Analysis & Selection



*danceability',  
'loudness',  
'speechiness',  
'acousticness',  
'instrumentalness',  
'valence',  
'tempo'*



track	artist	art_genres
Appalachian Spring: VIII. Coda. Moderato	Aaron Copland	['american modern', 'classical', 'classical', 'ea...]
The Illusory Body	Nancy Hennings	['meditation', 'singing bowl', 'tone']
Pagliacci (Sung in German): Act II Scene 2: Pa...	Ruggero Leoncavallo	['classical', 'italian opera']
Die Zauberflöte, K.620 / Erster Aufzug: "Dies ...	Wolfgang Amadeus Mozart	['classical', 'classical era']
Longtemps Longtemps	Charlie Couteur	['chanson', 'french rock']
West Side Story: Act I: Tonight	Leonard Bernstein	['american modern', 'classical', 'classical', 'cl...]
Let The Rest Of The World Go By - Out Of Afric...	John Barry	['adult standards', 'british soundtrack', 'cla...]
Come Sunday - Solo Piano	Tommy Flanagan	['bebop', 'big band', 'contemporary post-bop', '...]

track	artist	art_genres
In The Summer	Terry Riley	['american contemporary classical', 'avant-gar...]
Rottenatomy	Gorguts	['brutal death metal', 'canadian metal', 'deat...]
Midnight Cowboy	Ferrante & Teicher	NaN
Hero Without Honor	Vinnie Moore	['instrumental rock', 'new classical metal', '...]
Altitudes	Jason Becker	['instrumental rock', 'new classical metal', '...]
Cafo	Animals As Leaders	['djent', 'instrumental rock', 'jazz metal', '...]
Still Life - 2005 Digital Remaster	Van Der Graaf Generator	['art rock', 'canterbury scene', 'experimental...]
Tunnel Chase	Brad Fiedel	['classic soundtrack', 'scorecore', 'soundtrack']
Devouring Entities Devour	Winterwolf	['finnish death metal']

# un-dazzled

## #1

**audio features based  
clusterization of all songs**

## #2

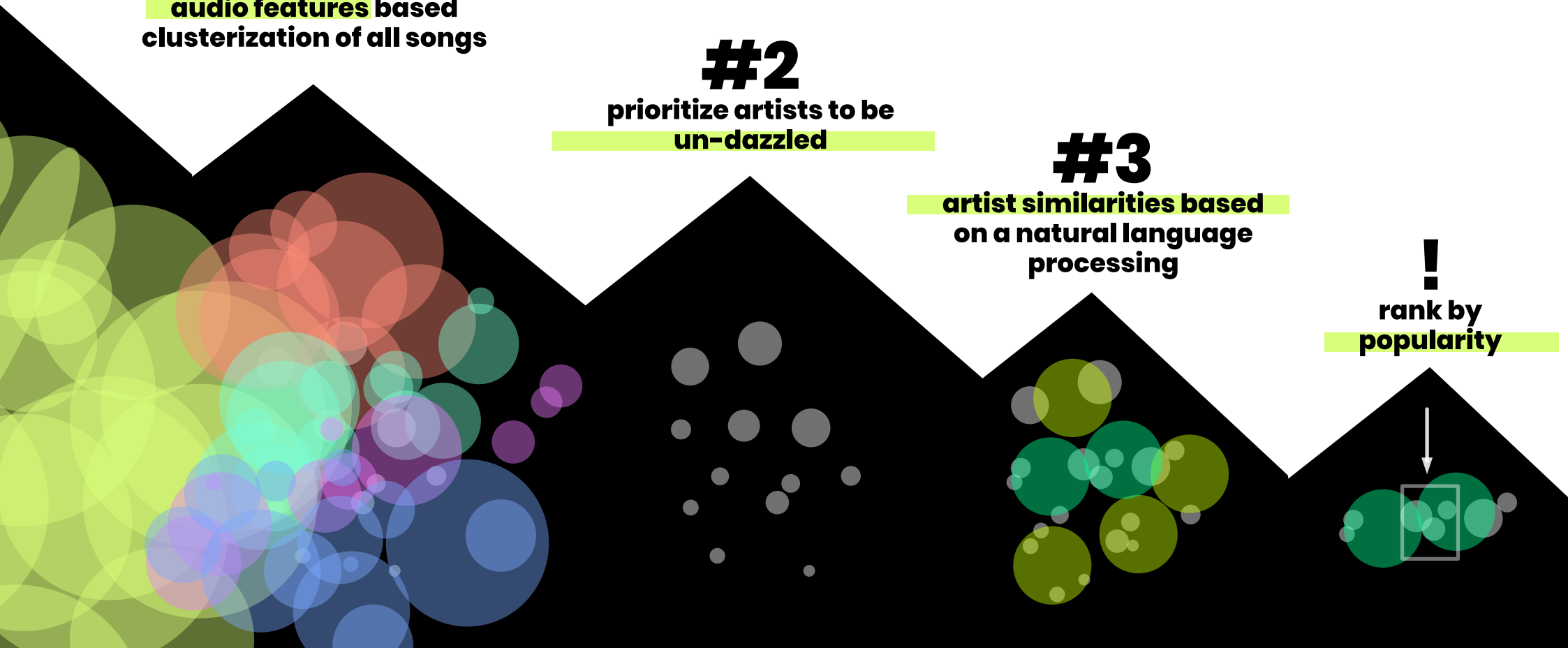
**prioritize artists to be  
un-dazzled**

## #3

**artist similarities based  
on a natural language  
processing**

## !

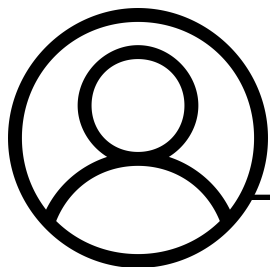
**rank by  
popularity**



the  
user,  
u,  
i,  
us

this where  
more and more  
talents are bein  
un-dazzled

*voilà !  
un-dazzling songs  
recommendations  
:) |*



**Speech recognition**  
**Written input**

“ i sayz :  
"sitin  
wiating  
wishin"

**Text validation**  
(levenshtein dist)

✓ did you mean:  
"Sitting, Wating, Wishing"

*let's make  
someone's  
days lighter ;)*

Artist: My Darkest Days  
Followers: 713.864  
Is Recommended: 2

for now,  
the reality



expectations



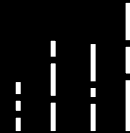


## how is this relevant?



### **people get happy**

help the locals,  
even when you're far



### **an investment**

you can find potential  
talents that are hidden



### **a network**

the more people use,  
better the model gets



**so, what kind of music do you want to un-dazzle today?**



**thank you**