

MUSIC RECOMMENDATION BASED ON EMOTION



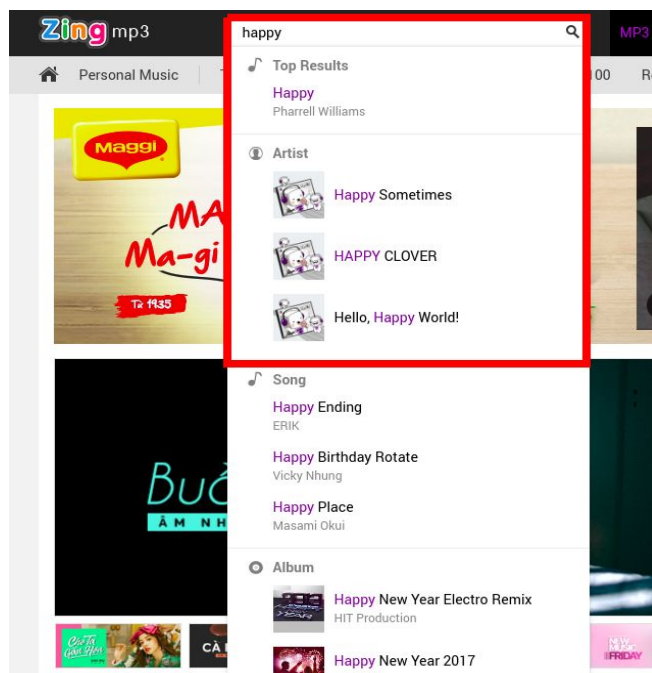
OUTLINE

1. Problem
2. Solution
3. Summary

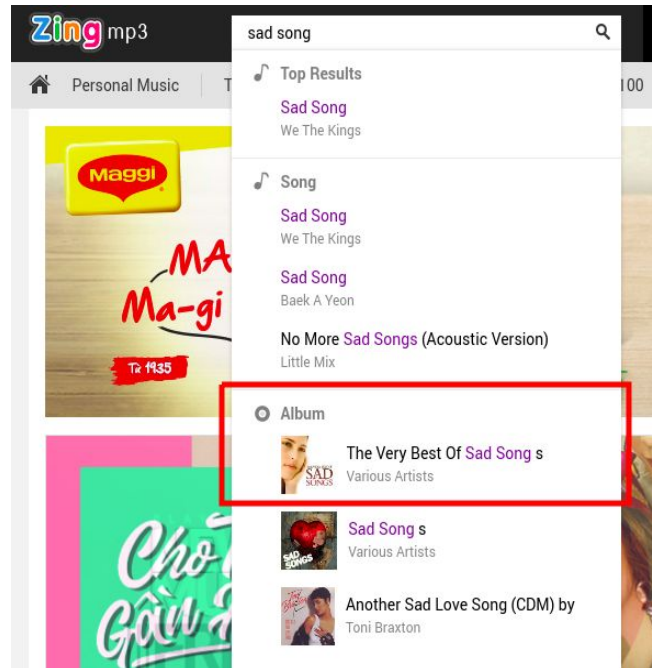
PROBLEM



Traditional
search
sometimes
doesn't work



*Query on meta data is not
enough*



*Only user-labeled data can be
suggested.*

Suggested
songs by old
methods
sometimes
break your
emotion flow

Home page Discover Song Playlist Collection Video BXH Theme Top 100 Other

Listening to Music > Songs Music Kids > Son Tung M-TP

Someone Will Go (Film Version) - Son Tung M-TP

20.534.684

Add Download music Share

Thích 49K Gửi Chia sẻ Chia sẻ

OFFICIAL

Song **Make Someone Will Go (Film Version)** by singer **Son Tung M-TP** instance, under the category of **Musical Youth**. You can listen, download (download music), download songs (mp3 version), playlists, MV / Video.

Upload by: **nct_official**

Lời bài hát It's All Over (Film Version)

Posted by: 0977909090

Song: Maybe I'll Go (Film Version) - Son Tung (M-TP)

I find nostalgia I look for the past.
Remember him and his memory
Return to love him, please come back here.
The weak hand struggles to stay with you ...
tears ... Roll on you.
So I know how to do ...
Love in my lost, fade gradually away in the wind.

See all

Y&Me.un
TOP 20 GIÀY
BÁN CHẠY NHẤT

PLAY NEXT

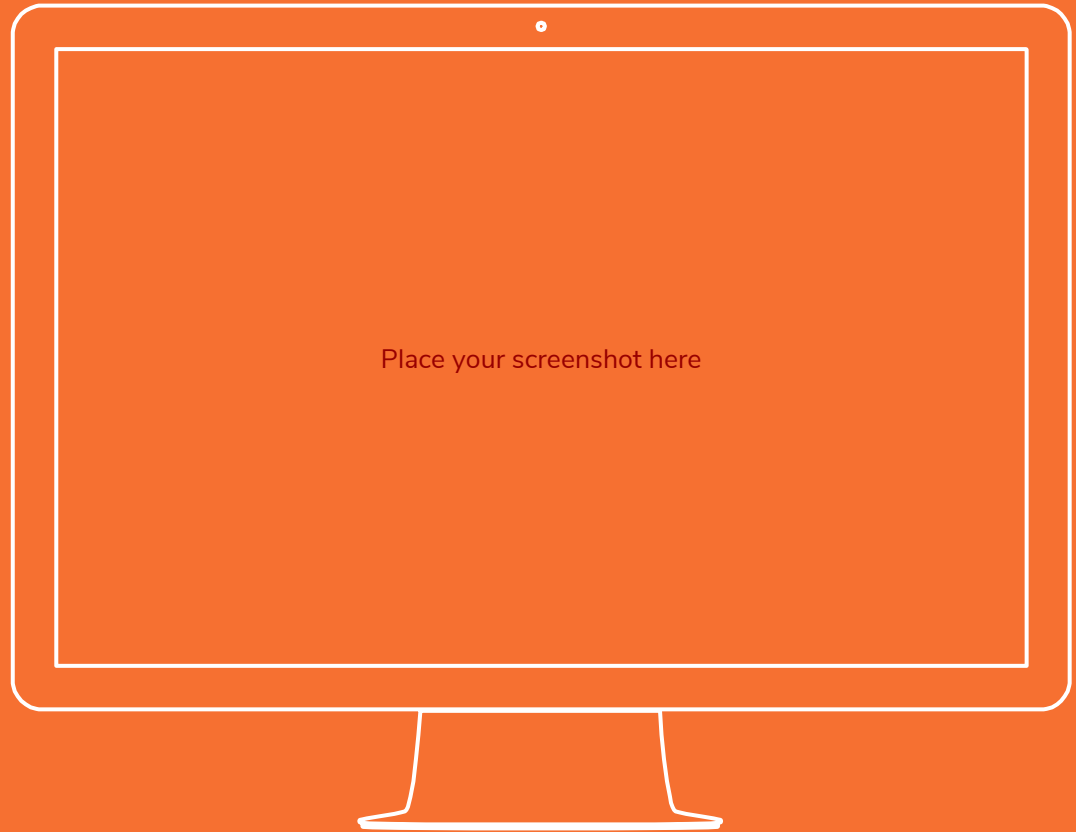
Autoplay

- Lac Troi
Son Tung M-TP
5.650.234
- This is England
Son Tung M-TP
14.843.489
- We do not belong together
Son Tung M-TP
32.423.712
- Why is it now?
Bich Phuong
4.815.005
- I Don't Believe In You
Noo Phuoc Thinh , Basick
10.449.751

see more

“Someone will go” sounds relaxed and a little bit sad. But “Lac troi” is so energetic

WEB DEMO

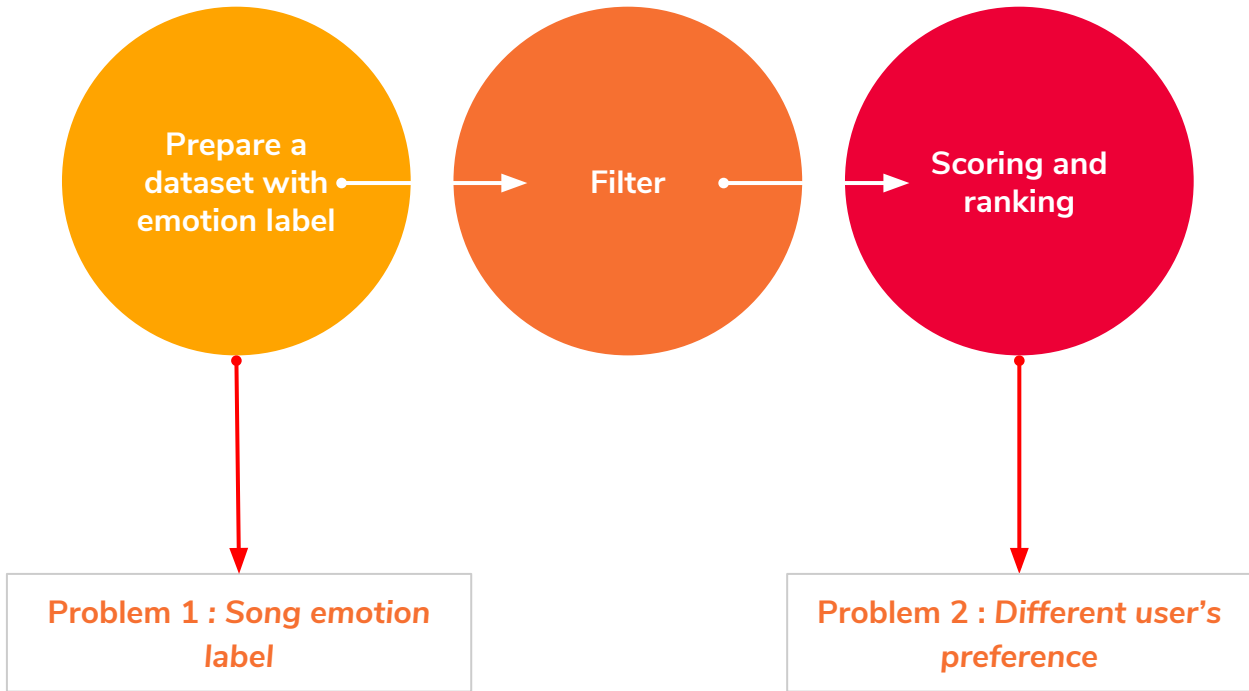


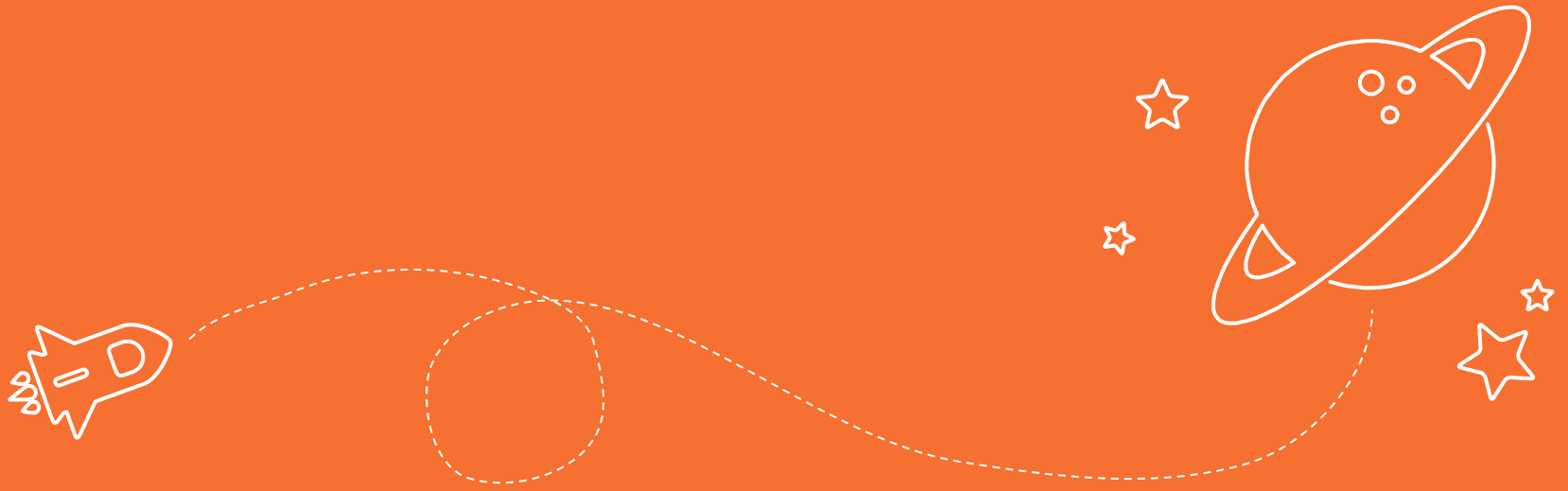
SOLUTION



WORKFLOW

A simple process to create playlist by mood





AUDIO CONTENT BASED APPROACH

WHAT

WHAT IS EMOTION ?

induced by music – feelings that the listener associates with a given track

expressed by music – feelings that are “intrinsic” to a given track

WHAT IS AUDIO-CONTENT?

Mid-High level features

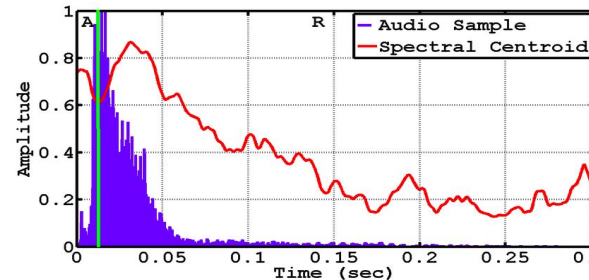
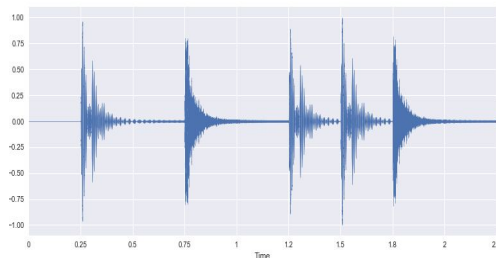
BPM, Loudness, Pitch, Chords Key, Harmony, Melody, Instrumentation, Texture, Structure,

Low level features

Onset, ZCR, RMS - Energy, Spectral Features, MFCC,

...

Low level features example: Onset and spectral centroid features



HOW



WHY



Trustful information

Audio data is what made the song's important features, not its label or meta data.



Fast & Available

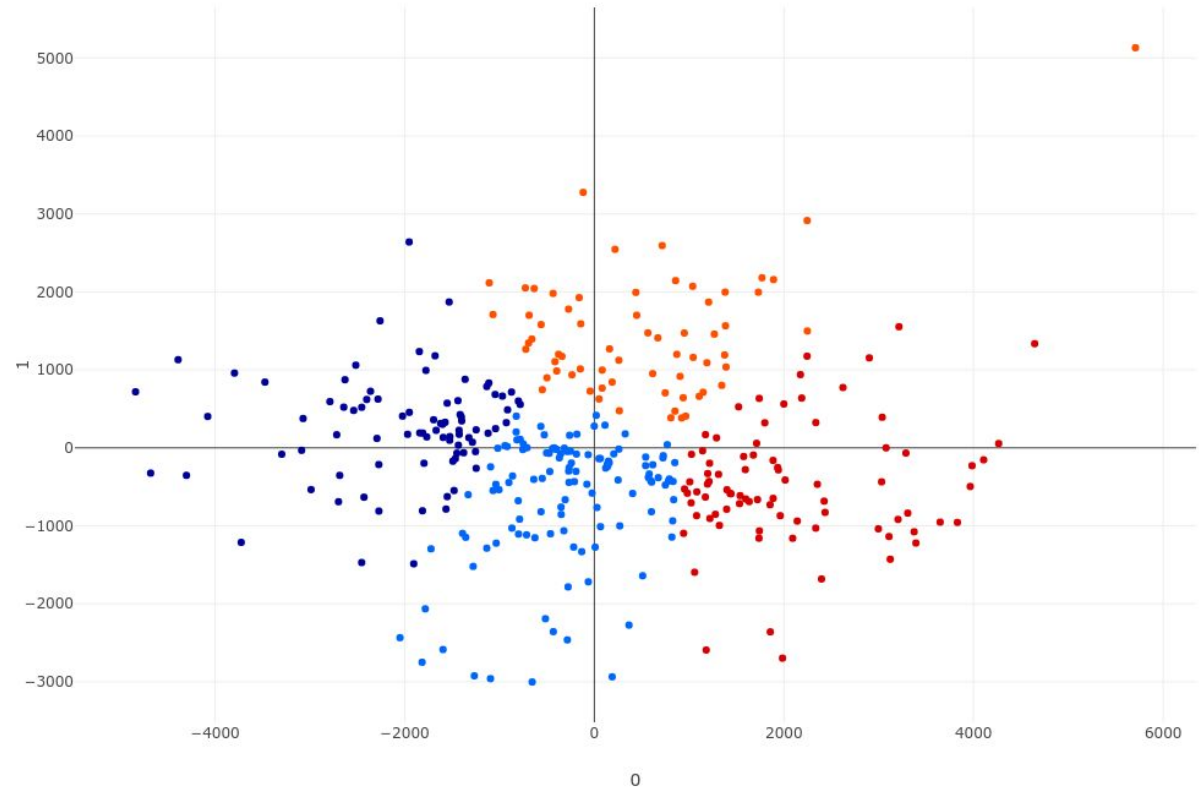
Fast Computation.
Require only audio source.



Numerical Vector Representation

Useful for
visualization and
machine learning
tasks

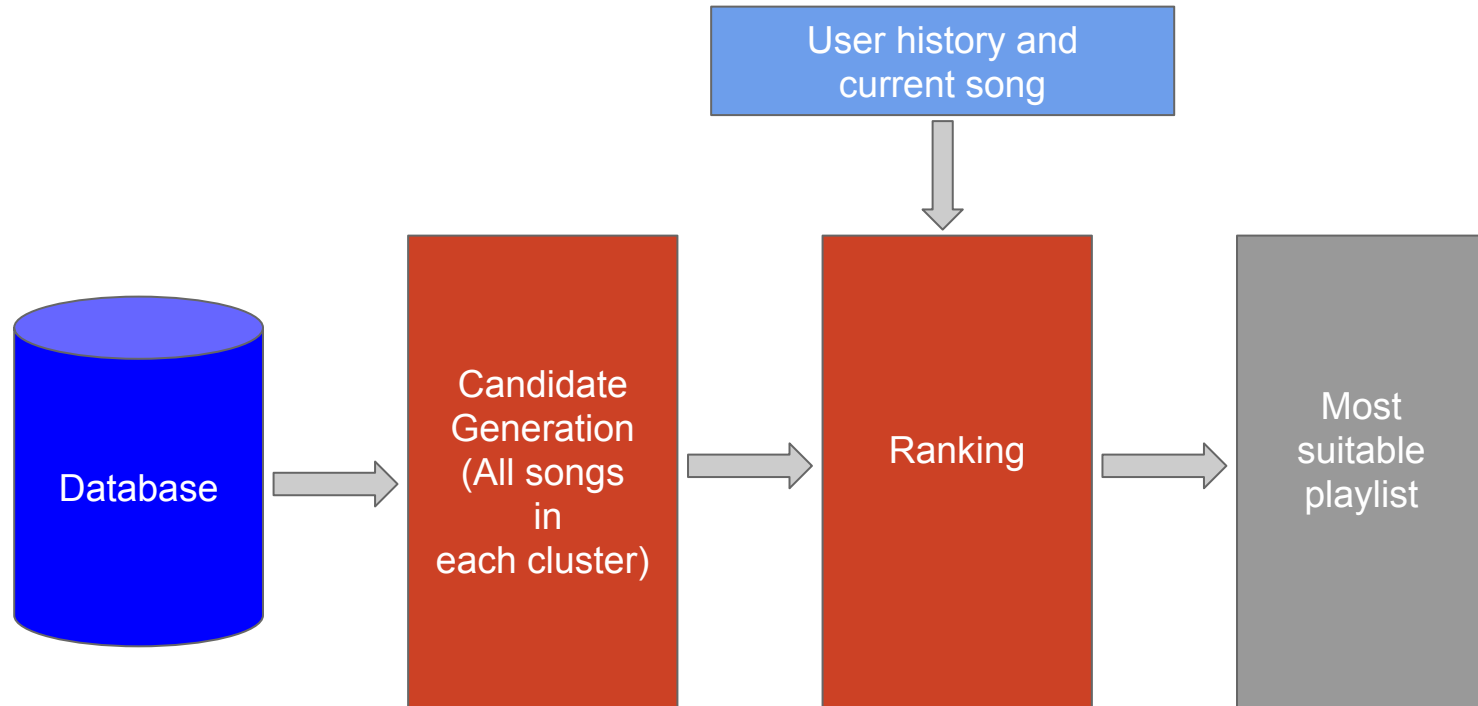
CLUSTERS VISUALIZATION



HOW

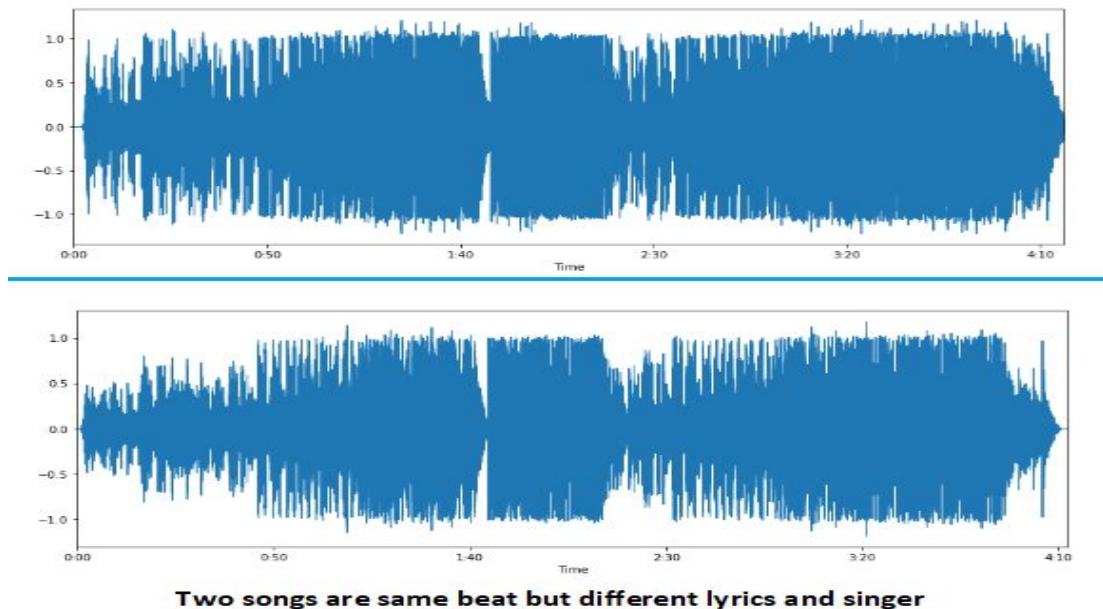


RANKING ARCHITECTURE

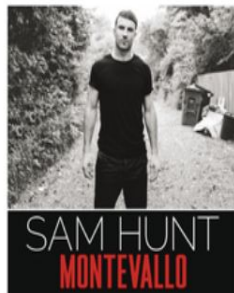


RANKING

- When user searching: all songs in a mood + personal preferences
- When user click a song: all similar songs (audio) in a mood + current the song



Result Ranking



Take Your Time

Sam Hunt

Country & Folk

Montevallo

2015

happy



Recommendation

- Maps**
Maroon 5 happy
- Better In Time**
Leona Lewis happy
- Animals**
Maroon 5 happy
- I Will Be**
Leona Lewis happy
- Sugar**
Maroon 5 happy
- Photograph**
Ed Sheeran happy
- Thankful**
Celine Dion happy
- 7 Years (The Megamix) - Miley Cyrus · Zayn · Justin Bieber & More (T10MO)**
T10MO happy
- Ain't My Fault**
Zara Larsson happy

SUMMARY



Audio
content
based
approach can
be applied to
solve other
problems





Thank you very much
for your attention!



Credits

Special thanks to all the people who made and released these awesome resources for free.

- Presentation template by [SlidesCarnival](#)
- Photographs by [Unsplash](#)
- Learn more about slidedocs at duarte.com/slidedocs