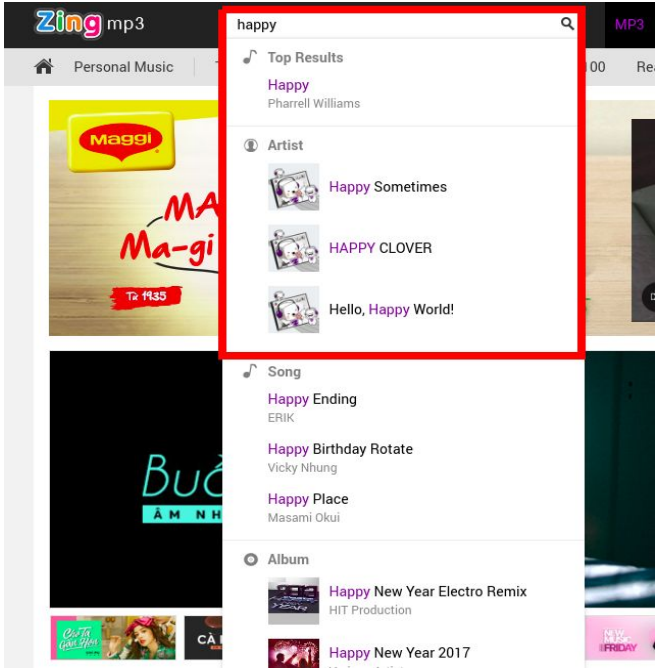
MUSIC RECOMMENDATION BASED ON EMOTION

OUTLINE

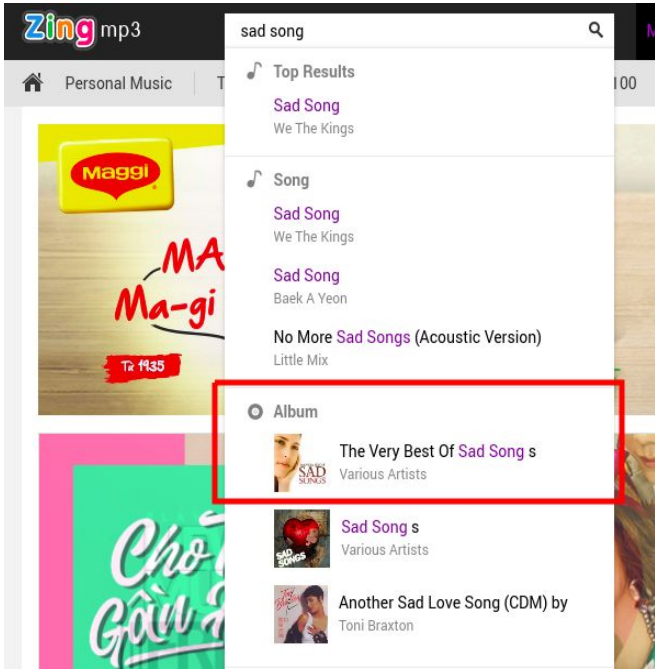
1. Problem
2. Solution
3. Summary

PROBLEM

Traditional search sometimes doesn't work

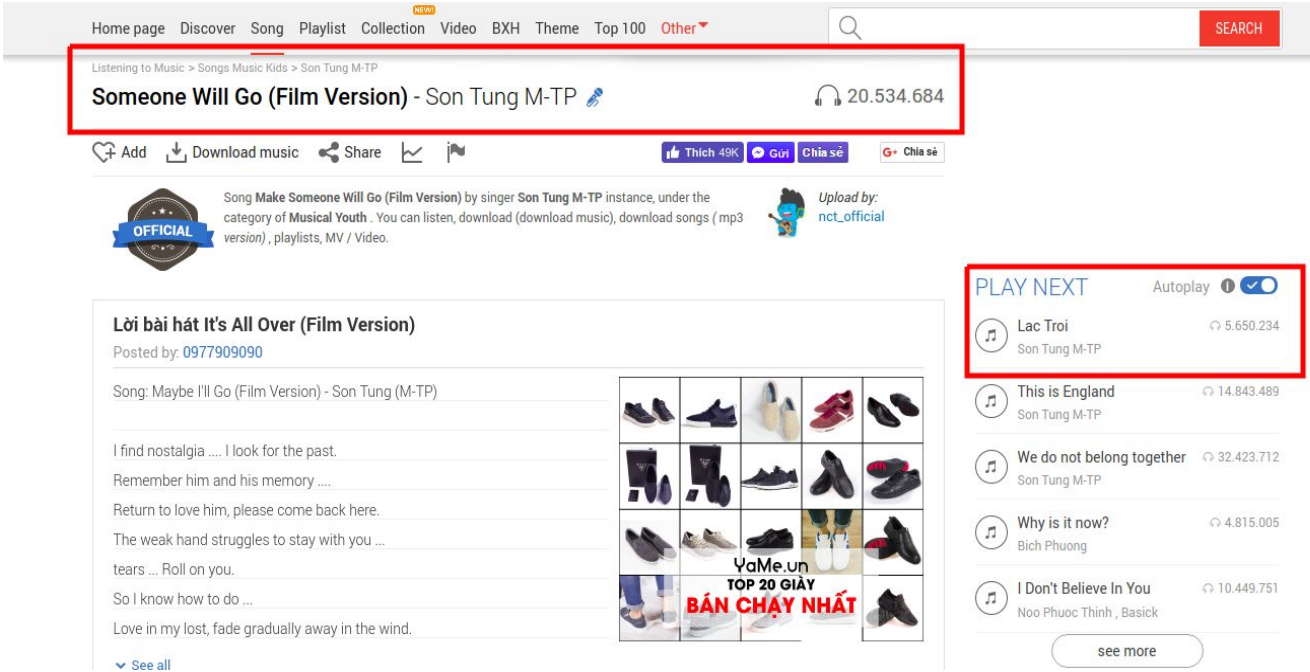


Query on meta data is not enough



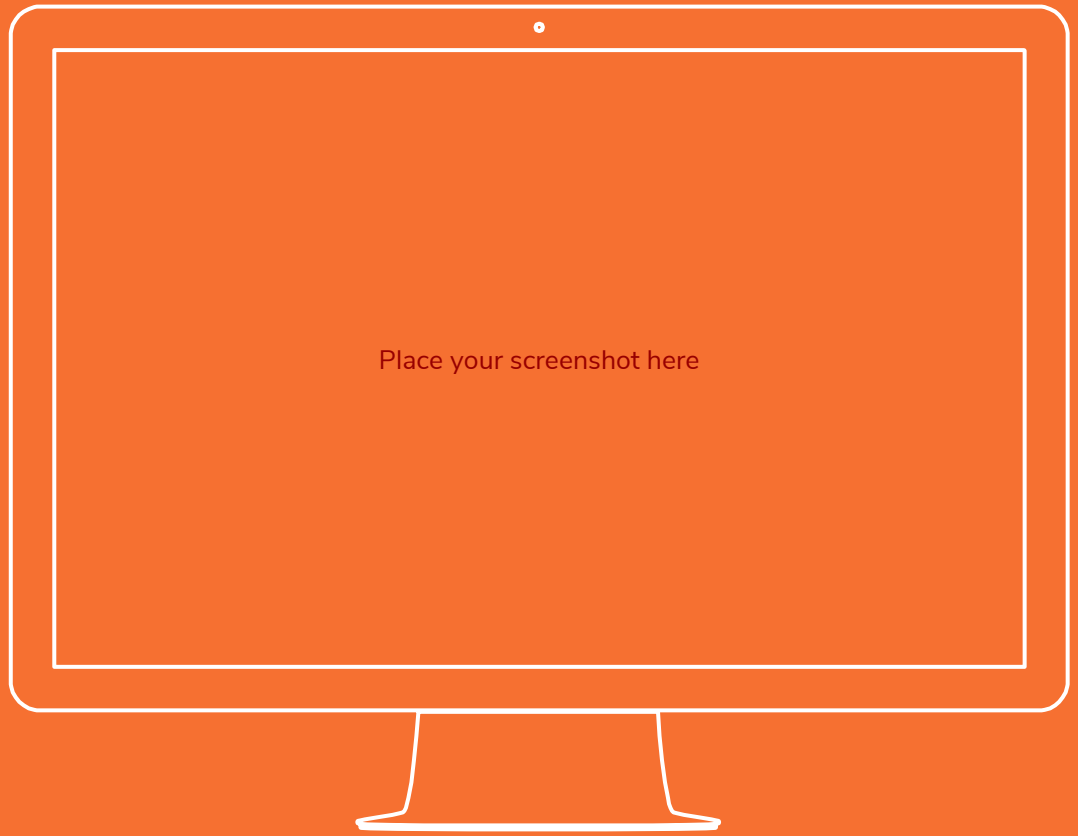
Only user-labeled data can be suggested.

Suggested songs by old methods sometimes break your emotion flow



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

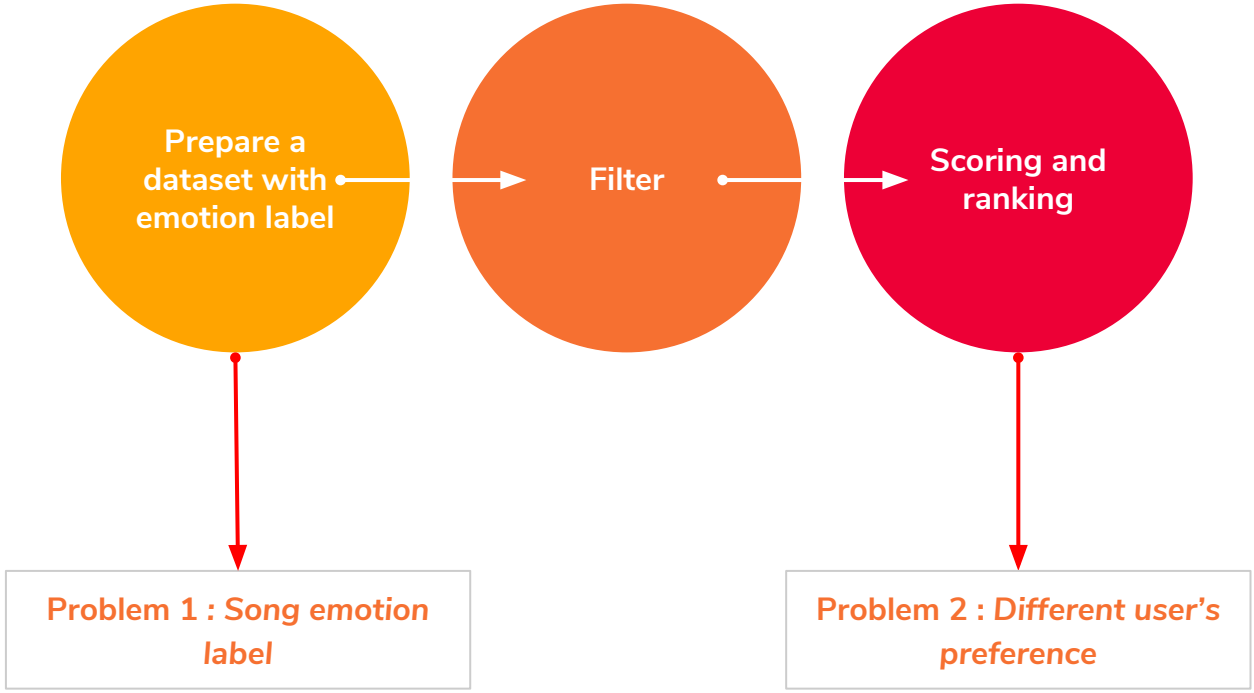
WEB DEMO



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?

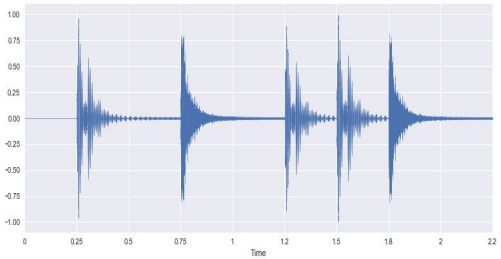
Mid-High level features

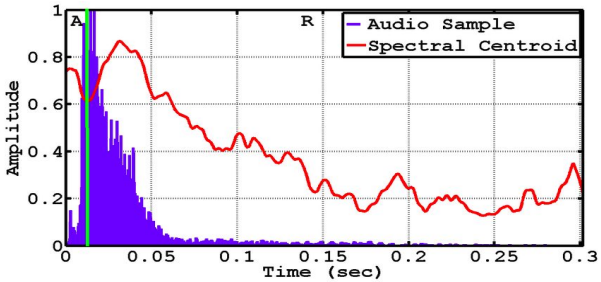
BPM, Loudness, Pitch, Chords Key, Harmony, Melody, Instrumentation, Texture, Structure, ...

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.

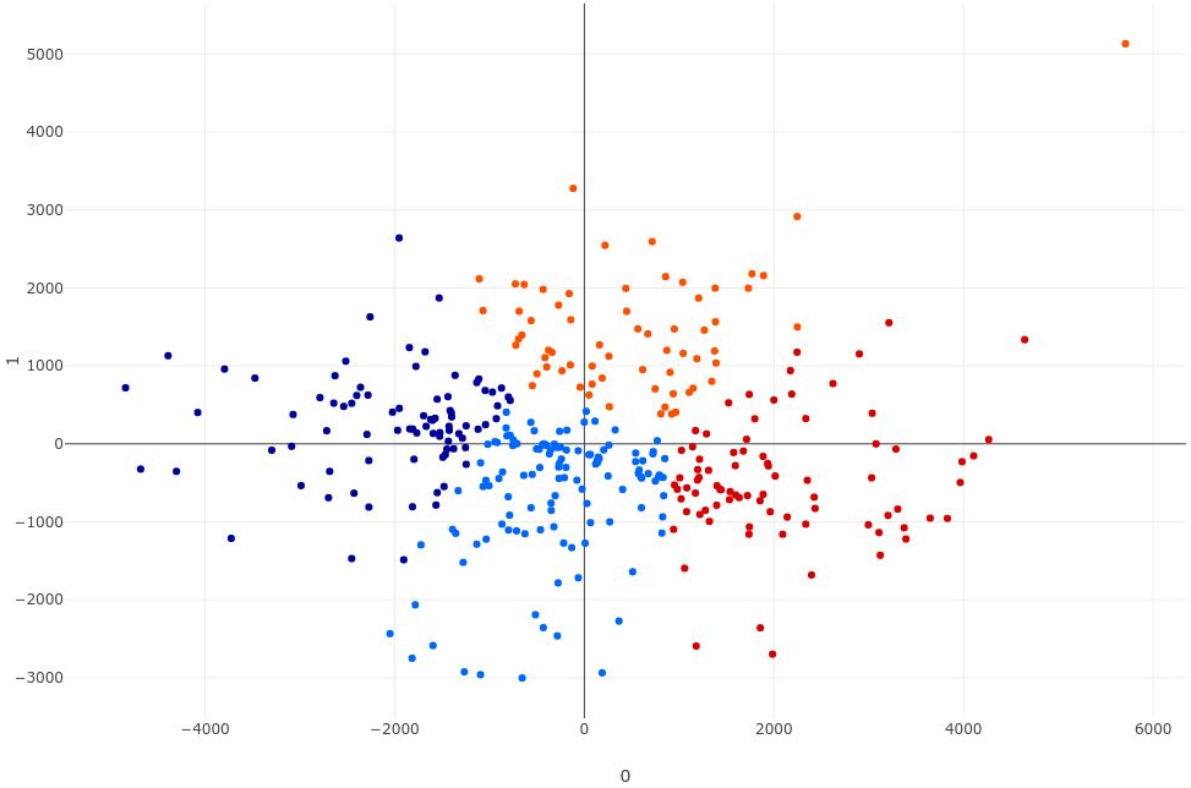
Fast & Available

Fast Computation. Require only audio source.

Numerical Vector Representation

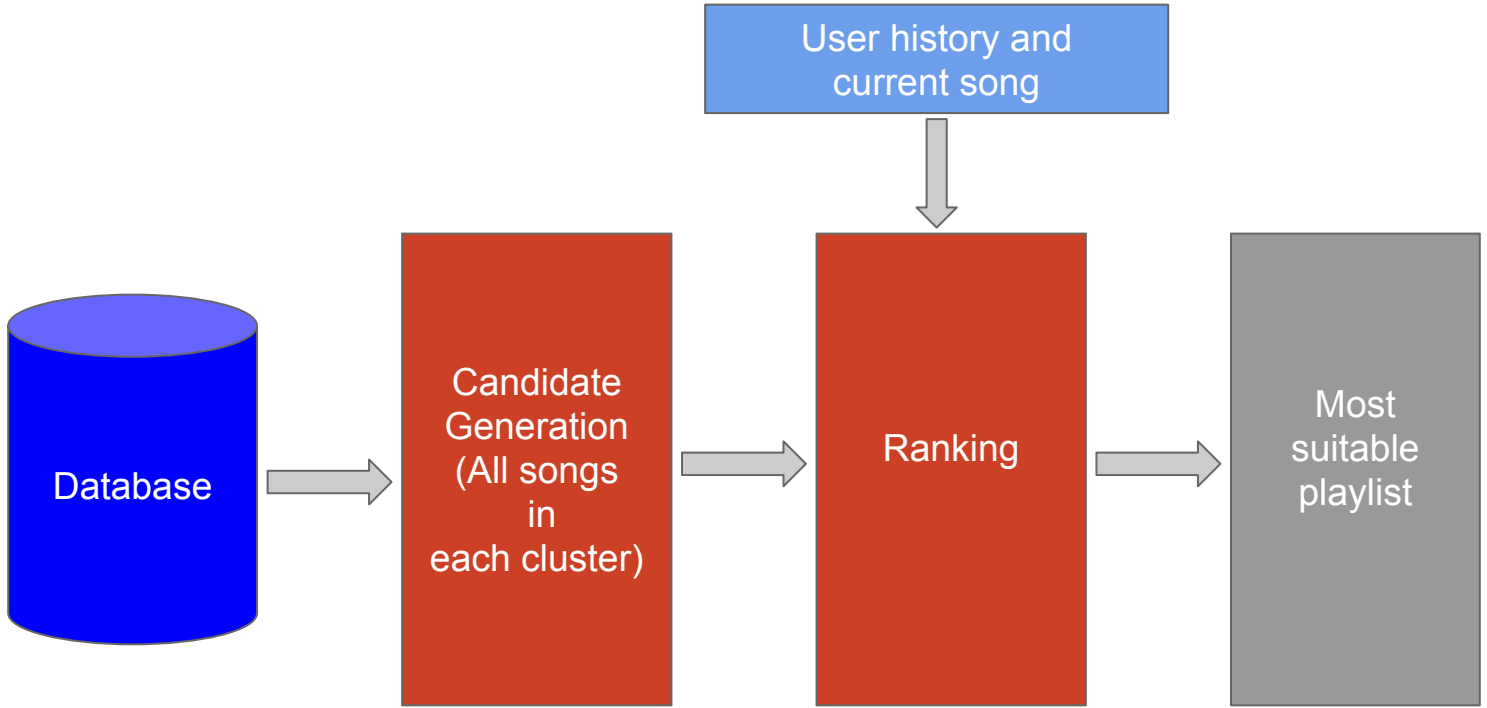
Useful for visualization and machine learning tasks

CLUSTERS VISUALIZATION



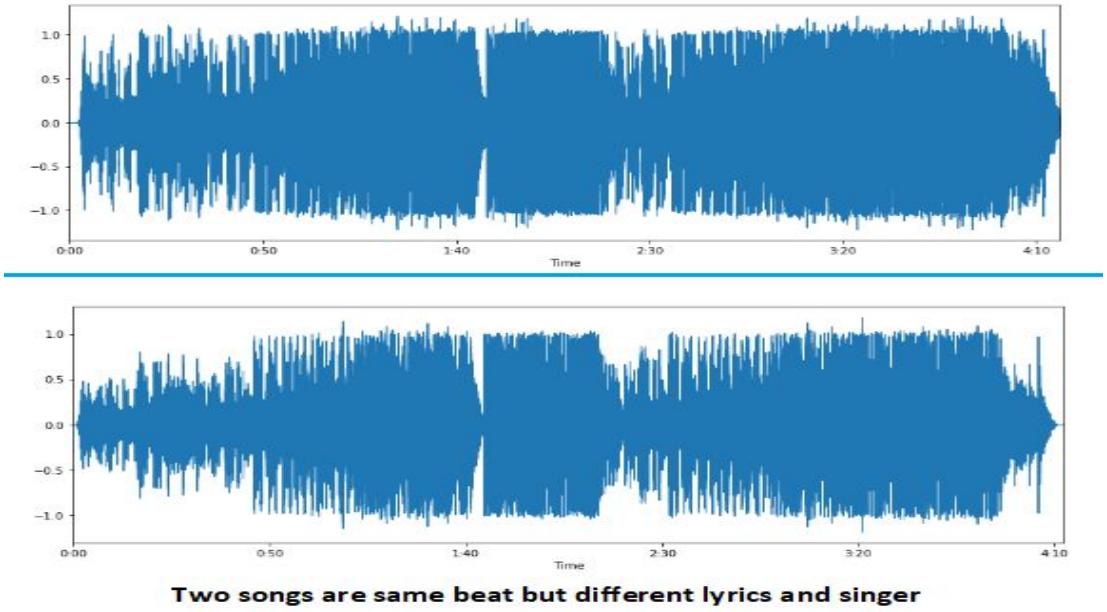
HOW

RANKING ARCHITECTURE



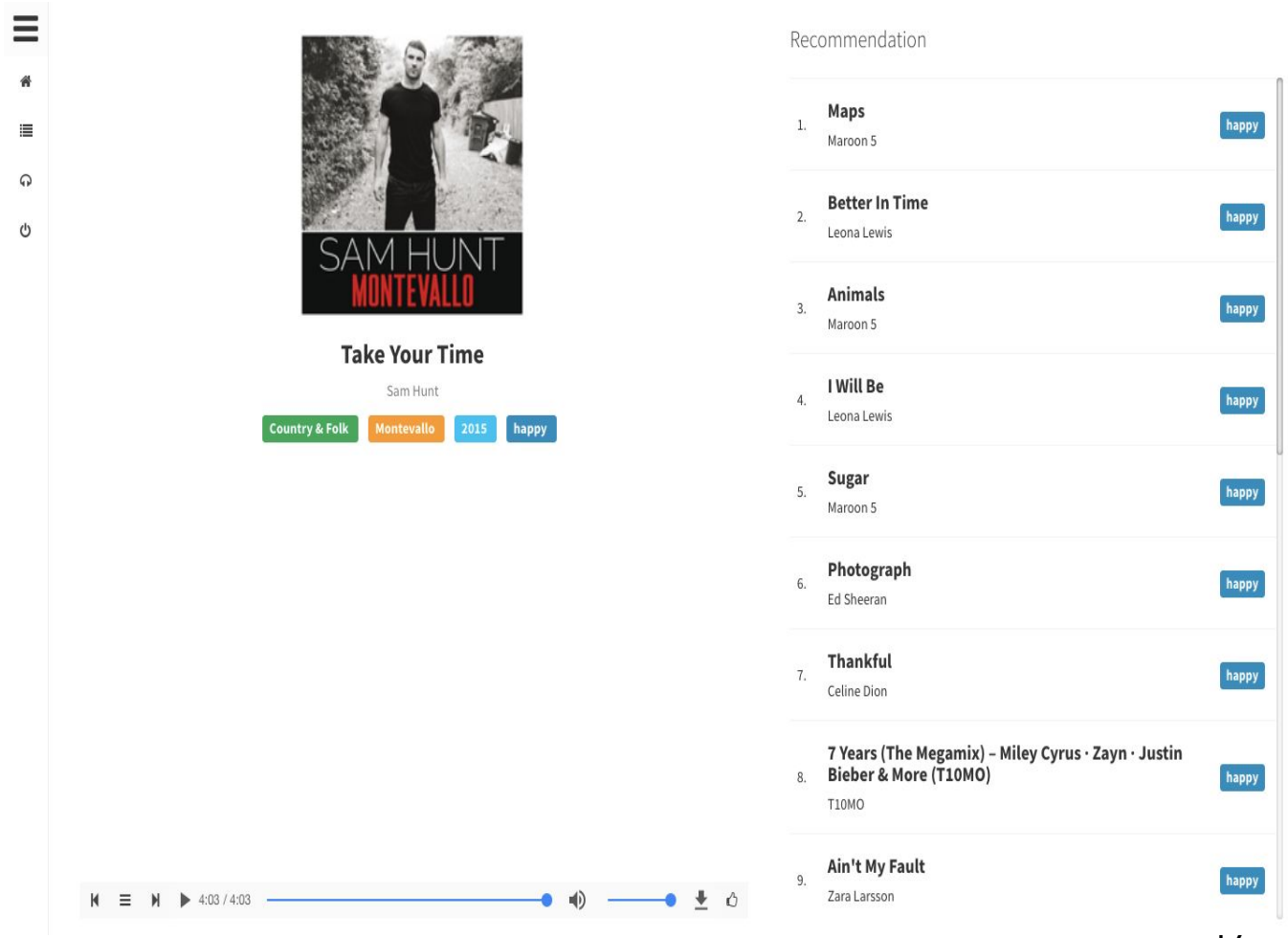
RANKING

- 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



Two songs are same beat but different lyrics and singer

Result Ranking



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