MusEmoji: A Music Suggestion System Based Upon Emoji Selection

Randall Harris ◆ Samantha Trippy

EECS 352 ◆ Professor Bryan Pardo ◆ Northwestern University

Background: Emojis have recently become highly integrated into media communication. Similar to music, Emojis are a medium through which we express thoughts and feelings. While research about the link between Emojis and emotion is emerging, there is still much to learn about our collective connotations associated with different Emojis. We sought to explore the link between music and Emojis.

Problem: There are numerous ways to classify music, including emotion, but there is no classification system based on Emojis.
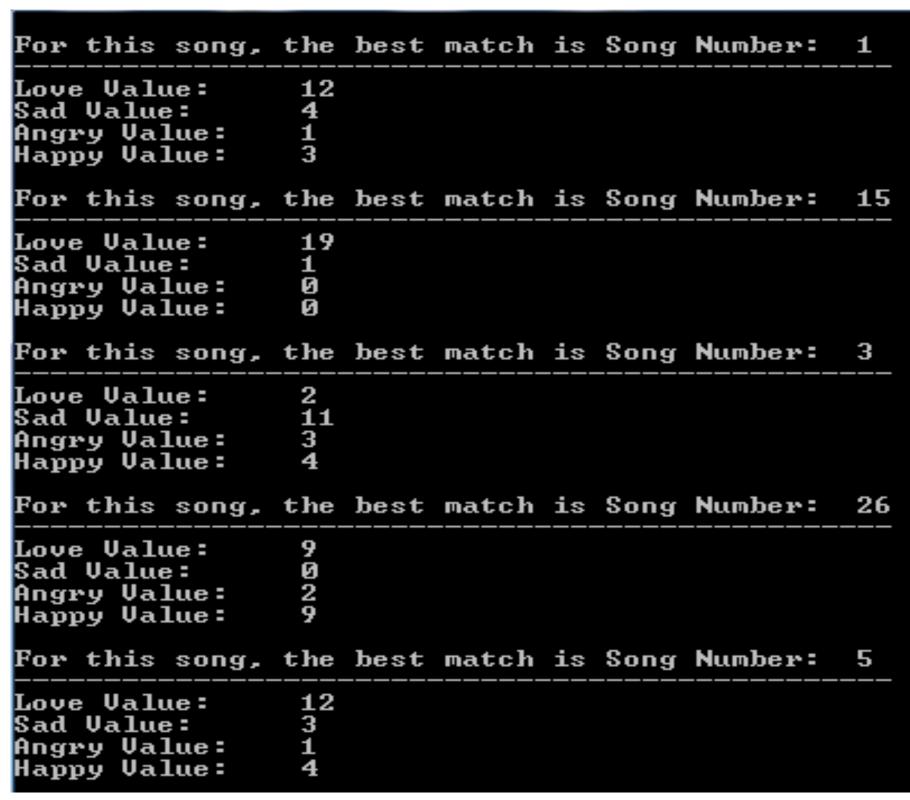
Solution: MusEmoji seeks to incorporate Emoji or Emoticons into the commonly used characteristics typically used to classify or organize music.

1) Collect Data

1. Please listen to AT LEAST one minute of each song and pick which emoji is the BEST fit for each song. Which emoji best represents song #1?

Screenshot of Mechanical Turk (MT) HIT Question

2) Organize Data

1	Since I Met You Baby	Kenny Neal	12	4	1	3
2	Just A Little Bit of You	Michael Jackson	14	0	0	6
3	Fake Plastic Trees (Acoustic)	Radiohead	2	11	3	4
4	Karma	Alicia Keys	3	10	5	2
5	If I Ain't Got You	Alicia Keys	12	3	1	4
6	Let's Get It Started	Black Eyed Peas	3	0	3	14
7	Forever	Chris Brown	14	1	1	4
8	She Will Be Loved	Maroon 5	12	7	1	0
9	Heart-Shaped Box	Nirvana	5	4	8	3
10	Don't Go Away	Oasis	7	6	1	6
11	Spin (Album Version)	Taking Back Sunday	1	1	13	5
12	Touch The Sky	Kanye West	0	2	2	16
13	Metal	Nine Inch Nails	0	2	11	7
14	Paralyzed	The Cardigans	6	7	5	2
15	Let's Make Love (Album)	Faith Hill	19	1	0	0
16	Don't Stop The Music	Rihanna	6	0	0	14
17	Into The Groove	Madonna	4	0	1	15
18	Slaughter The Gods	The Accursed	0	1	17	2
19	Shape of My Heart	Backstreet Boys	11	8	1	0
20	Fall In Love (Rub a Dub Mix)	John Legend	17	0	0	3
21	My Baby	Janet Jackson	15	0	1	4
22	Change Clothes	Jay-Z	2	0	5	13
23	Piece of My Heart	Janis Joplin	11	3	5	1
24	Raining on Our Love	Shania Twain	10	9	1	0
25	Soot and Stars	The Smashing Pumpkins	1	18	0	1
26	Hips Don't Lie	Shakira	9	0	2	9
27	The Heretic Anthem (Live)	Slipknot	0	0	18	2
28	Will You Love Me Tomorrow	The Shirelles	16	2	0	2
29	Permanent Lonely	Billie Jo Spears	1	8	1	1
30	Bite Back	The All-American Rejects	2	5	7	6
31	Don't Worry Baby	Bryan Ferry	11	4	1	4
32	Poker Face	Lady Gaga	5	0	4	11
33	Lively Up Yourself	Bob Marley	2	0	1	17
34	Losin' End (LP Version)	Michael McDonald	1	17	2	0
35	Beautiful	Eminem	2	9	5	4
36	4 Words (To Choke Upon)	Bullet For My Valentine	2	1	14	3
37	Lesson Learned	Alice In Chains	1	3	13	3
38	Be With Me	Mindy McCready	17	0	0	3
39	I Only Have Eyes For You	John Stevens	19	0	0	1
40	Heaven's In New York	Wyclef Jean	2	1	1	16

List of Songs (from Million Song Dataset) and Organized Results From MT

3) Create and Test System


```
For this song, the best match is Song Number:  1

Love Value:      12
Sad Value:       4
Angry Value:     1
Happy Value:     3

For this song, the best match is Song Number:  15

Love Value:      19
Sad Value:       1
Angry Value:     0
Happy Value:     0

For this song, the best match is Song Number:  3

Love Value:      2
Sad Value:       11
Angry Value:     3
Happy Value:     4

For this song, the best match is Song Number:  26

Love Value:      9
Sad Value:       0
Angry Value:     2
Happy Value:     9

For this song, the best match is Song Number:  5

Love Value:      12
Sad Value:       3
Angry Value:     1
Happy Value:     4
```

System Results of Comparing MT Data to Test Inputs

4) Create Playlist

"London Bridge" by Fergie
"Single Ladies (Put A Ring On It)" by Beyonce
"Loba" by Shakira

Playlist Created From Dataset

McCormick
Northwestern Engineering

MusEmoji
R. Harris | S. Trippy
randallharris2017@u.northwestern.edu
srtrippy@u.northwestern.edu

NORTHWESTERN UNIVERSITY