

CS315A PROJECT PROPOSAL

Gopichand Kotana (14249) Gunda Abhishek(14257) Nalluru Sai Harsha (14408)

LYRIC DICTIONARY

1 Objective

Lyrics give aesthetic completeness to a song, it is a component of the songs that stays with a listener. In this project, we aim to list all the songs that contain a specific word (Keyword) which a user is interested in, while visualizing the lyrical resemblance between them.

We believe, it will be intriguing to the user if we not only return the songs that contain his search key, but also the common words in the lyrics of the selected songs. Usually people search for a song using section of lyrics. However, our scheme let's a user search for a list of songs that depict the key word.

2 Motivation

We recently came across Lamm's *History of Music* project which details every song on Billboard's Year-End Hot 100 list since 1960. It had some interesting patterns and introduced us to musical data visualizations. We wanted to make visualizations that not only will be helpful in visualizing the data but also of use for the user.

Each colored rectangle in the visualization represents one song, and each column represents one year of the list, organized from the top of the graph to the bottom starting with the year's most popular song. The redder the rectangle is, the more times that word popped up in the songs lyrics.

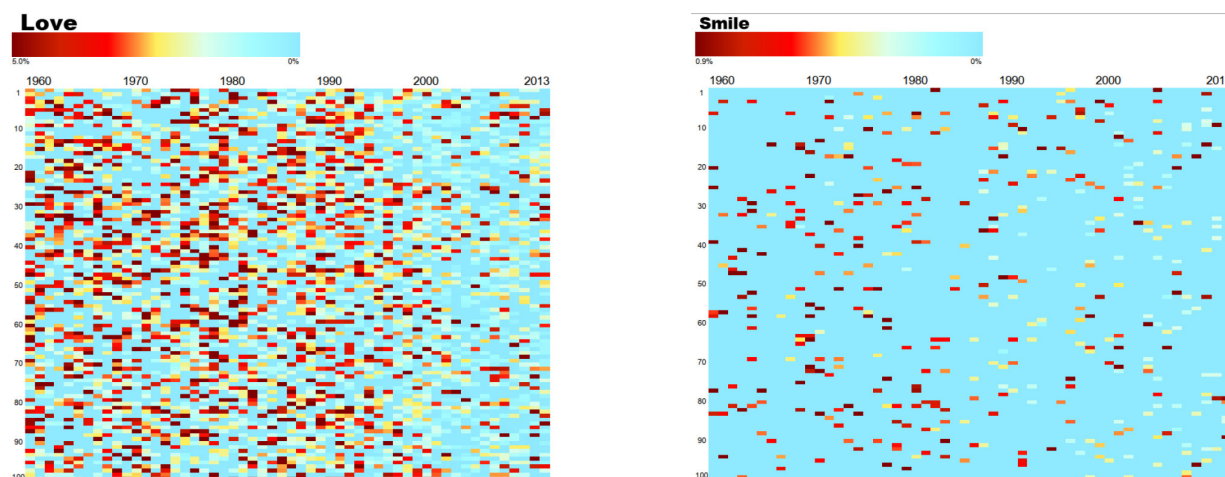


Figure 1: Some visualizations from Lamm's project

3 Workflow

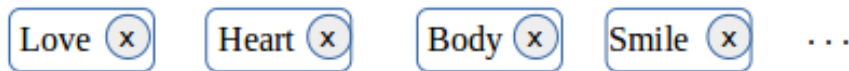
Creating The Database

- The first step is to obtain the data by scraping lyrics from websites like *http://www.azlyrics.com*; *www.lostfm.com* etc.
- From the data obtained, we remove all the trivial words like *a, an, ain't, the, I, you, ..*
- From the trimmed data above, we search for frequent words of each song and assign them to be the keywords for the song
- Create the database(JSON data) of songs where every song is associated with a keyword-list and also attributes like lyric writer, artist, composer, production company etc.

Visualization Of The Data

- We intend to use *NEO4J* graph database and *d3.js* as a graph visualization software to display the data.
- In the web-interface, when user searches for a keyword, a graph is displayed with nodes as songs which have the searched-keyword and edges between them with the common words
- On hovering on the node, we could be able to see the song details.

Search From The Keywords :



Songs With The keyword:

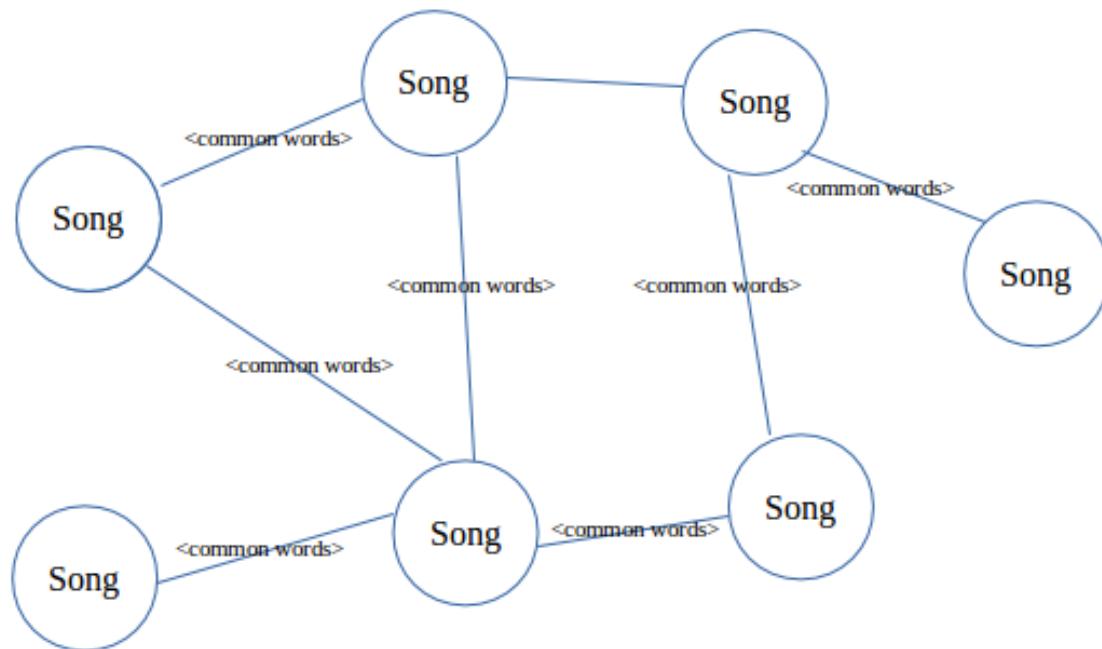


Figure 2: Abstract View Of A Search Query

4 Advancements

The following are some advanced features that we would like to integrate in the project if we accomplish our basic objective.

- Add details of the song, like label, production company to make the data rich and make visualizations along with them
- To display the lyrics of a song when a user clicks on the song
- Calculate different statistics from the usage and make song suggestions accordingly.