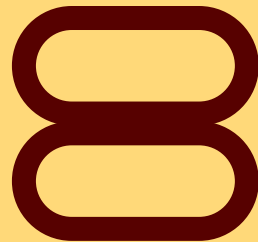
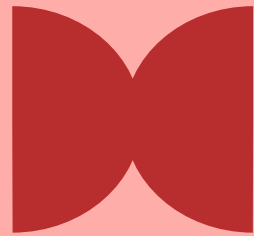
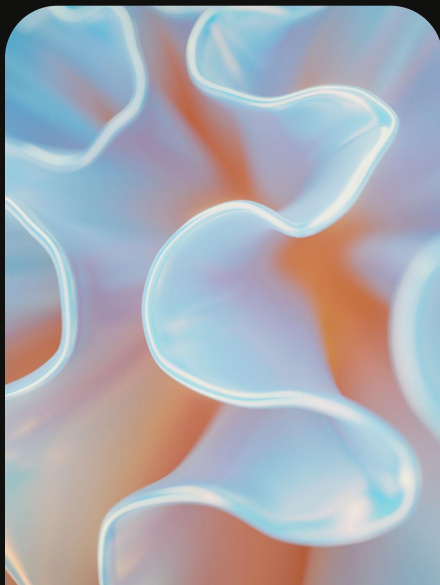


# Analyzing Song Trends



Caleb Agoha  
27/05/2025

## Overview



### Scrape Songs

Spotify

.env

Playlists



### Scrape Lyrics

Genius

Merging

Cleaning

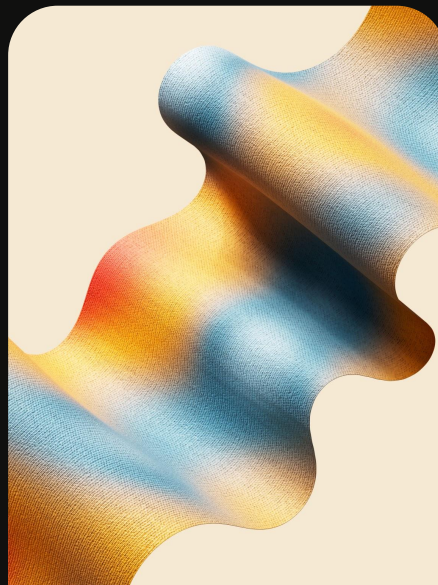


### Explore Data

Kaggle

Keyword

Keyword



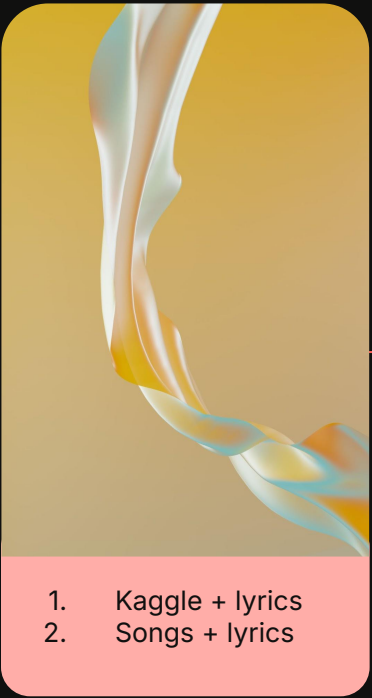
### Conduct Research

NLP

Regex

LDA

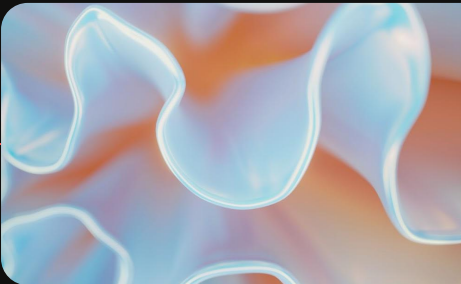
## Data

- 
1. Kaggle + lyrics
  2. Songs + lyrics



### Spotify Songs Dataset

year, name, artists,  
album, popularity,  
release\_date



### Genius Lyrics Dataset

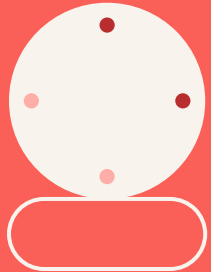
track\_name, artist,  
lyrics



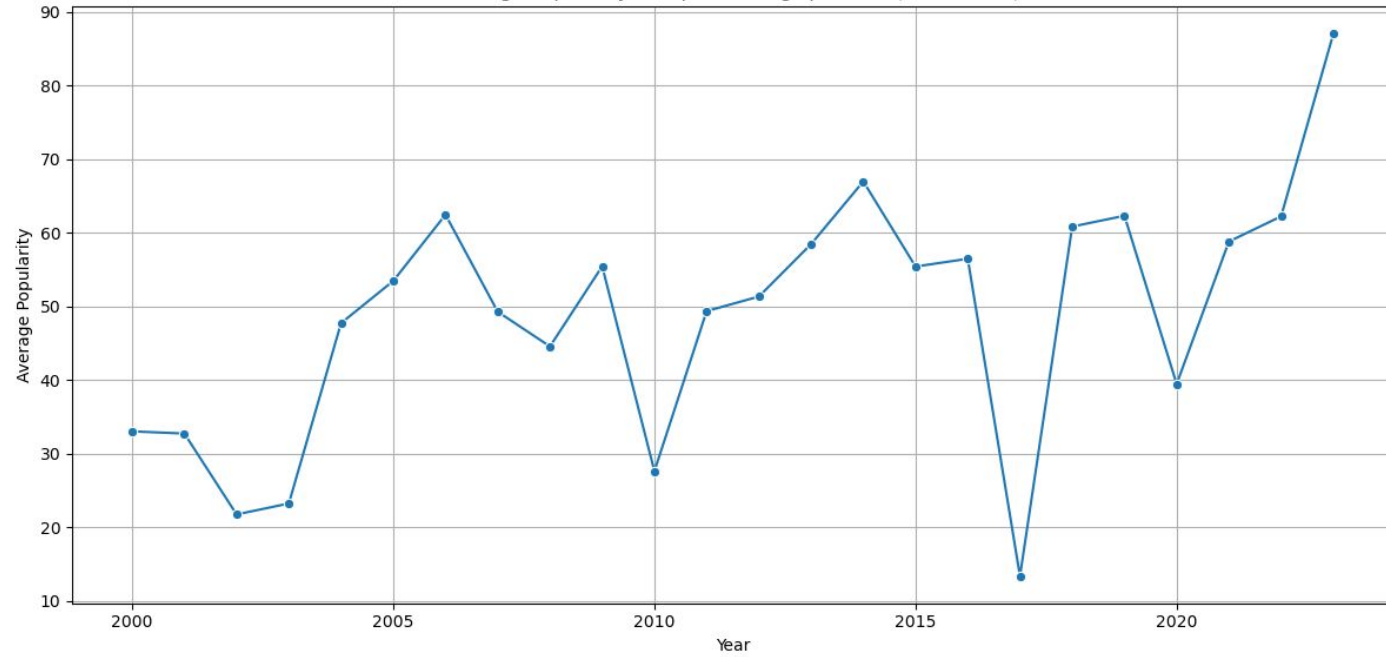
### Kaggle Spotify Dataset

danceability,  
energy, key, loudness,  
track\_genre, etc.

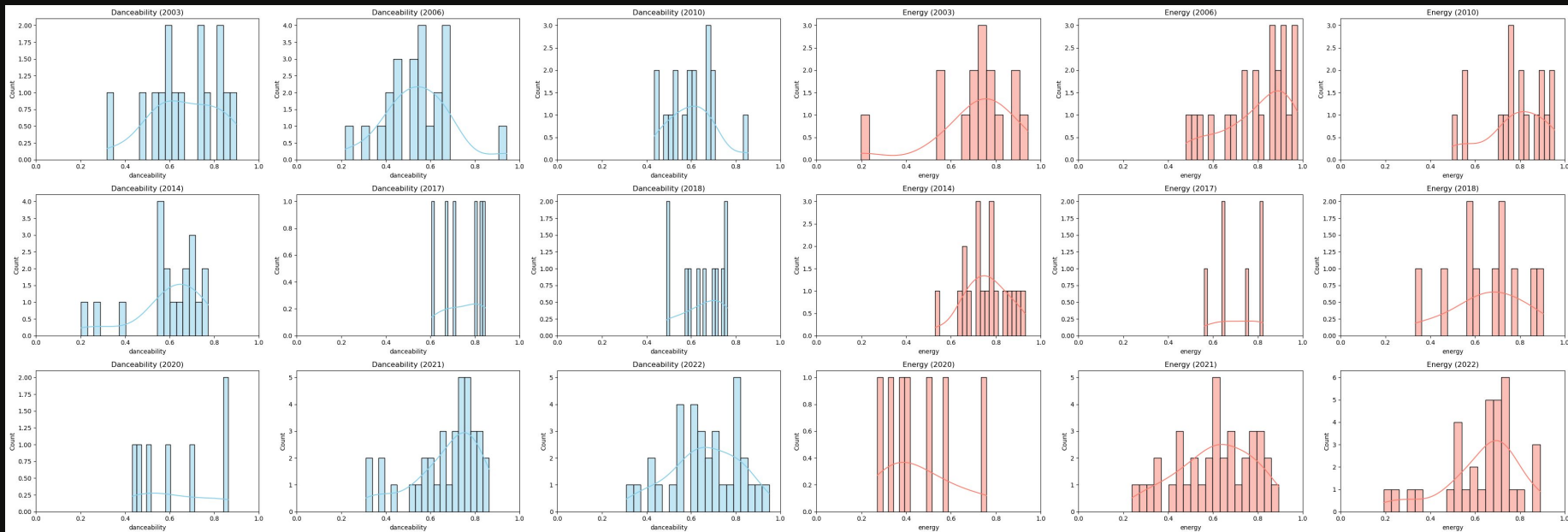
# Exploratory Data Analysis



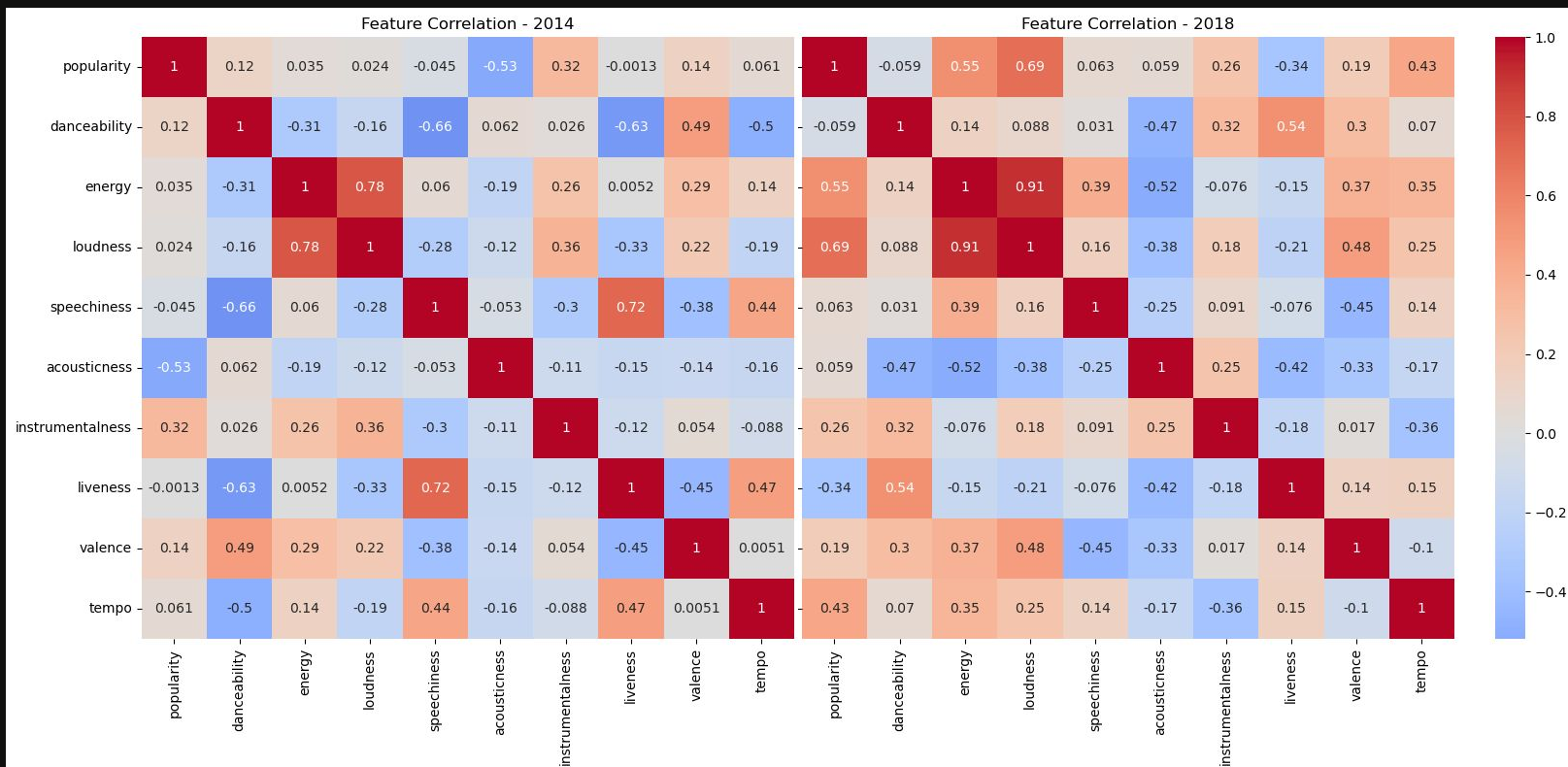
Average Popularity of Top 100 Songs per Year (2000-2023)



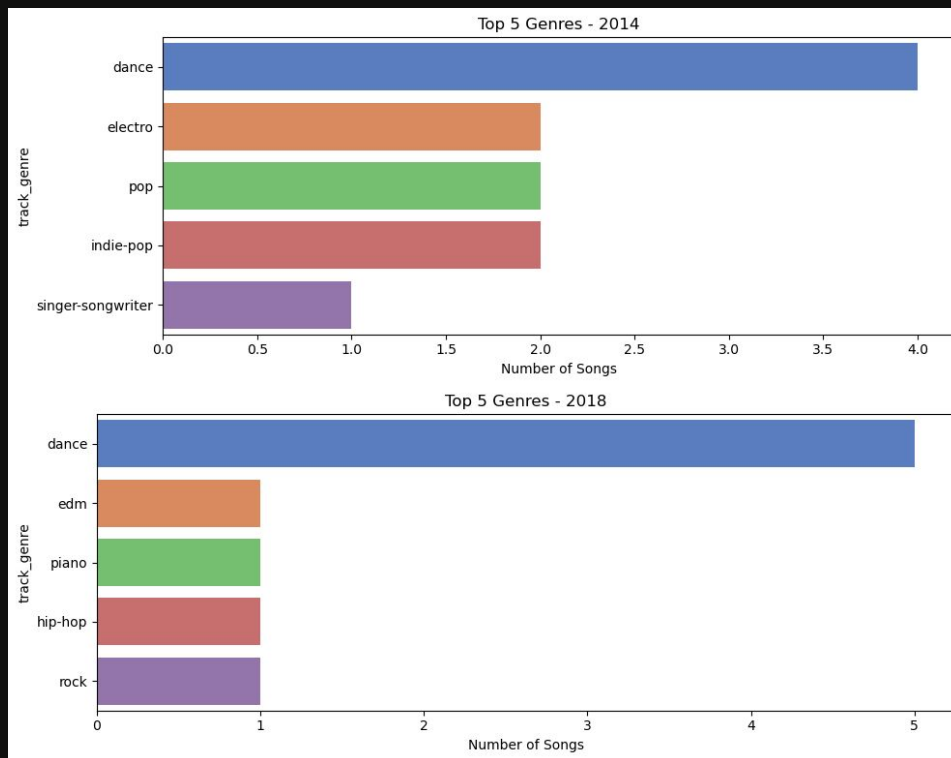
# Audio Features:



# Audio Features:



# Audio Features:



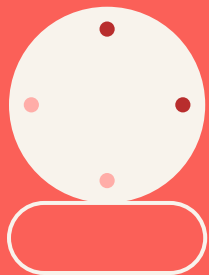


# Research Question

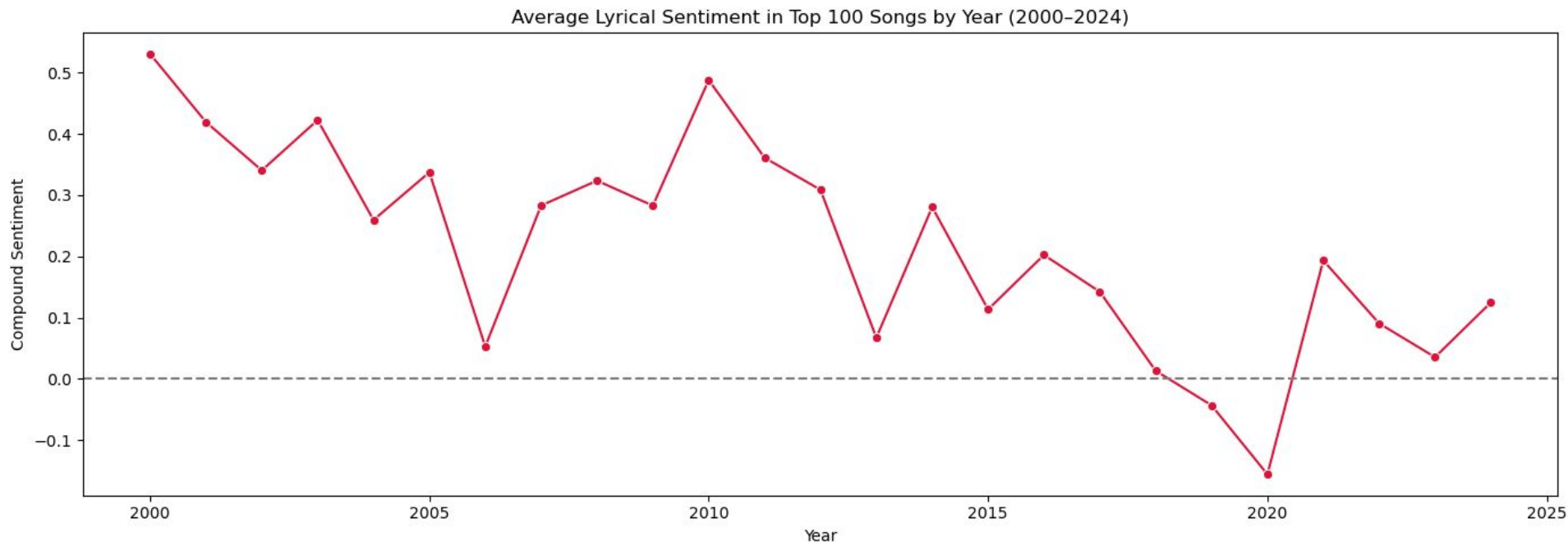
How have the sound and emotional themes of popular music evolved from 2000 to 2024, and what does this reveal about shifting cultural moods and industry trends?

## Sub Questions

1. How has the emotional tone of popular music changed over time?
2. What lyrical themes dominate different time periods?
3. Is popular music becoming more musically and lyrically homogeneous?



# Sentiment Analysis



# Latent Dirichlet allocation

Topic 0: ['love', 'dont', 'baby', 'know', 'just', 'like', 'wanna', 'cause', 'want', 'let', 'got', 'girl', 'say', 'youre', 'way', 'ill', 'good', 'feel', 'right', 'tell']

Topic 1: ['know', 'youre', 'like', 'just', 'time', 'dont', 'think', 'better', 'need', 'away', 'make', 'ive', 'say', 'said', 'cause', 'life', 'day', 'gonna', 'got', 'ill']

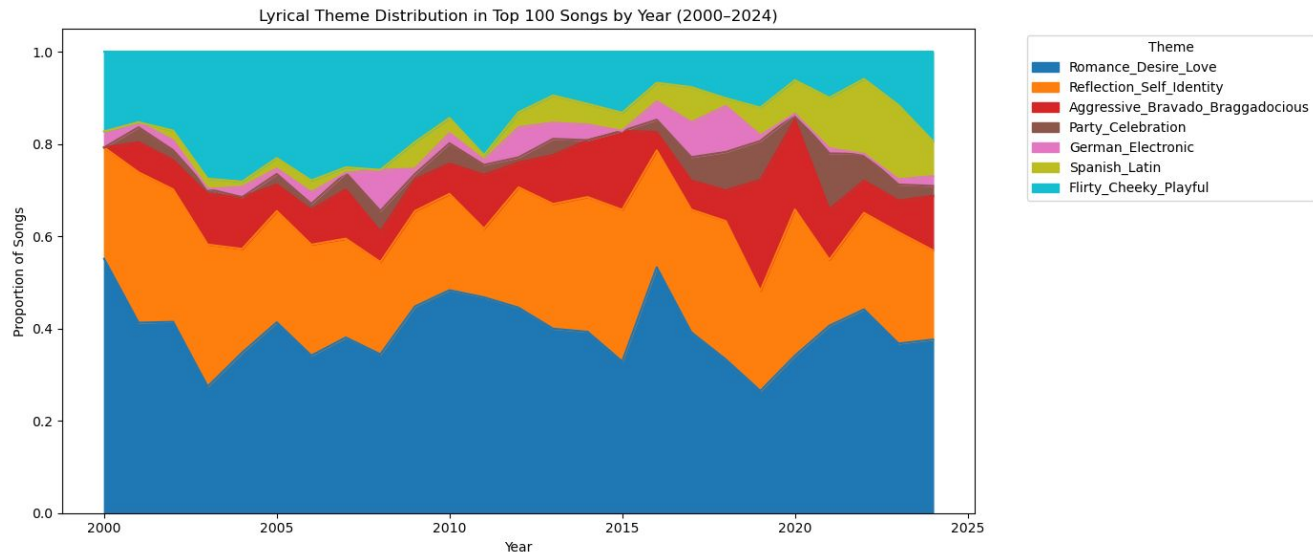
Topic 2: ['bitch', 'fuck', 'like', 'got', 'nigga', 'em', 'aint', 'shit', 'money', 'dont', 'niggas', 'voc', 'eu', 'thats', 'know', 'tell', 'fuckin', 'hot', 'man', 'turn']

Topic 3: ['dance', 'night', 'lets', 'evet', 'bir', 'da', 've', 'bu', 'music', 'ben', 'iin', 'senin', 'seni', 'eh', 'beni', 'ohohohohoh', 'gibi', 'dj', 'rock', 'eh eh']

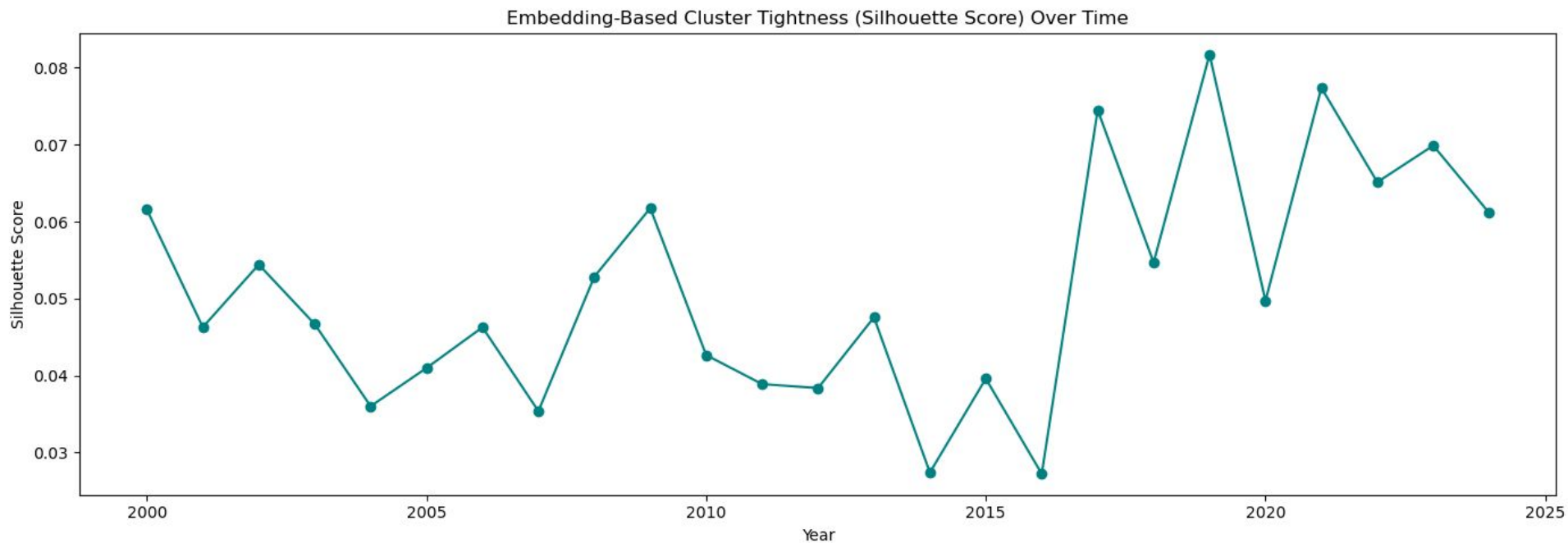
Topic 4: ['ich', 'shake', 'du', 'die', 'nicht', 'es', 'und', 'oohoo', 'gonna', 'nana', 'mich', 'shake shake', 'break', 'ist', 'high', 'das', 'sie', 'nananana', 'zu', 'bin']

Topic 5: ['que', 'te', 'en', 'mi', 'se', 'lo', 'el', 'yo', 'tu', 'por', 'es', 'si', 'je', 'una', 'como', 'pero', 'ey', 'para', 'ti', 'le']

Topic 6: ['like', 'got', 'know', 'come', 'make', 'girl', 'boy', 'ya', 'just', 'ayy', 'aint', 'gon', 'wanna', 'watch', 'dont', 'baby', 'yo', 'lets', 'rock', 'let']



# Cluster Analysis



# How we'll work together

1

## Cultural Shifts

- Optimism → Complexity
- Rise in Introspection
- Mood Swings

2

## Industry Trends

- Algorithmic Influence
- Global Integration

3

## Implications

- The meaning behind popular songs
- Homogeneity vs Authenticity

4

## Evolution

Music is an incredibly complex and ever evolving part of humanity. It is an artistic expression of the human experience.