Spotify Trend for Ed Sheeran, G.E.M and JJ Lin*

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This study examines the evolution of danceability in the music of Ed Sheeran, JJ Lin, and G.E.M. from 2010 to 2024, revealing that Sheeran maintains a high level of danceability, G.E.M. incorporates more danceable elements over time, and JJ Lin shows significant fluctuation in his focus on danceability.

1 Introduction

In recent years, the concept of "danceability" has emerged as a significant metric for evaluating the musical characteristics of various artists and genres. Danceability reflects how suitable a track is for dancing. A score of 0.0 indicates the least danceable track, while a score of 1.0 signifies the most danceable, as defined by Spotify Howlin and Rooney (2021). This paper examines the evolution of danceability in the music of three prominent artists—Ed Sheeran, JJ Lin, and G.E.M.—across their respective discographies over time. By analyzing data on their released albums from 2010 to 2024, this study aims to explore trends and patterns in how these artists have developed their sound concerning danceability. We find that the trend analysis of danceability over time reveals that Ed Sheeran maintains a consistently high level of danceability in his music, while G.E.M. shows moderate variability, gradually incorporating more danceable elements. In contrast, JJ Lin exhibits the most fluctuation, initially focusing less on danceability before recently shifting back toward more danceable music.

2 Data

Figure 1 shows the trend of 'danceability' over time for each of the three artists Ed Sheeran, JJ Lin, and G.E.M. Ed Sheeran's music shows a relatively stable trend, with danceability

*Code and data are available at: https://github.com/Cassieliu77/Spotify_Trend_Analysis.git

consistently above 0.5. The data points are closely clustered, which suggests that Ed Sheeran remains consistent and prioritizes danceable elements, which may attract a mainstream audience that enjoys upbeat, rhythm-driven music.

G.E.M. also shows a relatively steady trend towards danceability but more variability than Ed Sheeran's music. G.E.M.'s trend line initially drops but then rises, which shows a gradual adaptation to incorporate more danceable elements in recent years. This trend suggests that G.E.M. has achieved a balance between maintaining her core musical style and skillfully evolving to meet audience expectations. Her danceability values vary between 0.4 and 0.75, indicating moderate musical exploration.

JJ Lin had the most variation in danceability, with fluctuations ranging from 0.3 to 0.7. His trend line shows a gradually decreasing trend before a slight increase in recent years, and this indicates a period of less focus on danceability and then a re-focus on creating danceable music.

In contrast, Ed Sheeran tends to be in a stable mode, keeping his music highly danceable throughout his career. G.E.M. strikes a balance, showing some flexibility and moderate variation in danceability. JJ Lin has seen the most change, with a significant shift in the extent to which he emphasizes danceable elements in his songs. This comparison shows how each artist shapes the danceability of their music in different ways.

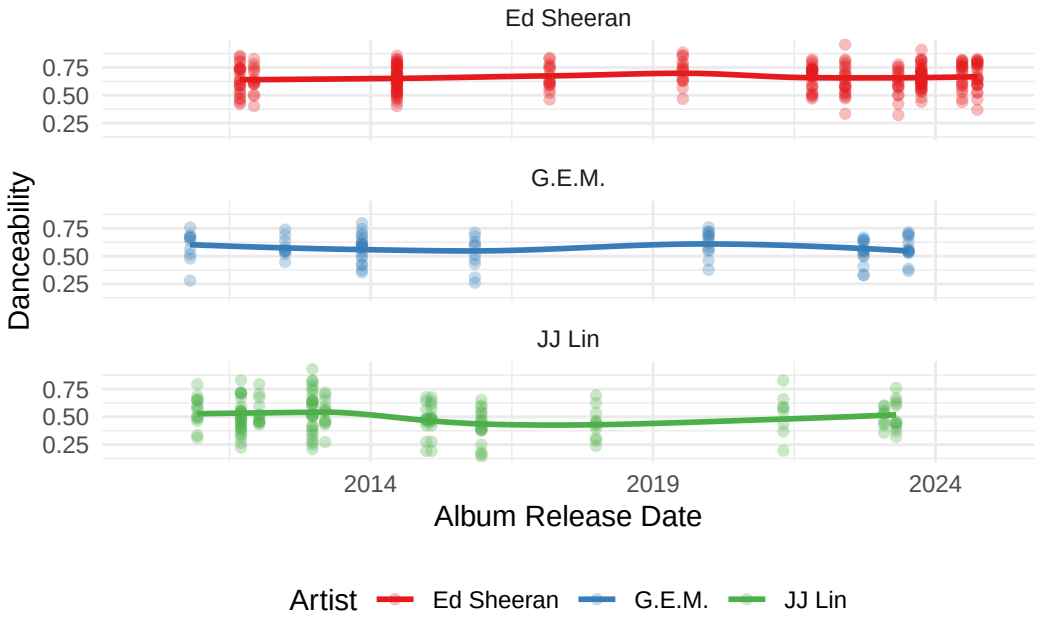

Figure 1: Danceability of Ed sheeran, G.E.M, JJ Lin artisits from 2010 to 2024

Appendix

Table 1: Summary Table for Ed Sheeran

Artist Name	Danceability	Duration
Ed Sheeran	0.642	258372
Ed Sheeran	0.749	220413
Ed Sheeran	0.592	185093
Ed Sheeran	0.370	323807
Ed Sheeran	0.818	235382
Ed Sheeran	0.807	219840

Table 2: Summary Table for GEM

Artist Name	Danceability	Duration
G.E.M.	0.542	223809
G.E.M.	0.552	247561
G.E.M.	0.691	196781
G.E.M.	0.547	200287
G.E.M.	0.676	251019
G.E.M.	0.625	209588

Table 3: Summary Table for JJ Lin

Artist Name	Danceability	Duration
JJ Lin	0.459	231586
JJ Lin	0.599	204881
JJ Lin	0.437	239865
JJ Lin	0.402	230253
JJ Lin	0.321	226571
JJ Lin	0.641	243868

#Acknowledgement

The data used in this paper comes from Thompson et al. (2022). This study uses R packages (R Core Team 2023) to clean and analyze the dataset, including libraries from spotifyr (Thompson et al. 2022), tidyverse (Wickham et al. 2019), usethis (Wickham et al. 2024), devtools (Wickham et al. 2022), ggplot2(**citeggplot?**) and knitr (**citeknitr?**). The data we used was from Spotify (Thompson et al. 2022).

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