BTS Albums: Danceability, Energy, and Speechiness from 2013-2022*

An Analysis of the World's Biggest Boyband's Albums

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This paper utilizes data from Spotify API to discuss the Danceability, Energy, and Speechiness South Korean boyband BTS's albums. We find that while the danceability levels stayed consistent, the energy and speechiness increased. These findings matter as Kpop has been gaining popularity in Western world, and suggest high energy and speechiness as important factors of the success of Kpop. The results provide insights into the evolution of BTS's music and the popularity of Kpop, which are be useful for industry professionals, fans, and researchers interested in the characteristics of successful Kpop.

1 Introduction

In recent years, Korean pop music, commonly known as Kpop, has gained immense popularity worldwide. One of the factors that contribute to the success of Kpop music is its danceability, which refers to the ability of a song to inspire dance movements in its listeners. Danceability is a crucial element in popular music, as it can engage listeners and create a sense of joy and energy. In this data analytics paper, we analyze the danceability of BTS's albums over the years and its correlation with the popularity of Kpop.

Danceability, energy, and speechiness are crucial elements in popular music as they can engage listeners. My findings show that [insert findings here]. Using data from Spotify's API, I explored the trend of danceability, energy, and speechiness scores in BTS's albums from their debut in 2013 to their latest release in 2022. I will visualize these scores over time and examine how they have evolved over the years. Additionally, I will draw from third-party sources to investigate the meaning and relationship of these scores to the popularity and reception of Kpop music in North America.

*Code and data are available at: https://github.com/joycexuan/BTS.

Despite the majority of their songs being in the Korean language, BTS is the most popular and successful boyband in the world. Therefore, this exploration is critical as it helps Kpop artists and fans visualize the creation, marketing, and ultimate success of Kpop music in the future. By analyzing danceability, energy, and speechiness, we can gain a deeper understanding of the factors that contribute to the success of Kpop and popular music in general.

In Section 1, I discuss the source of data used in this paper, the strengths and weaknesses of the Spotify APi, methodologies that follow it, and data terminology. Section 2 discusses the results from my graphs, including the trend over the 2013-2022 time period. In section 3, I explore the factors that contribute to the trends of these scores.

2 Data

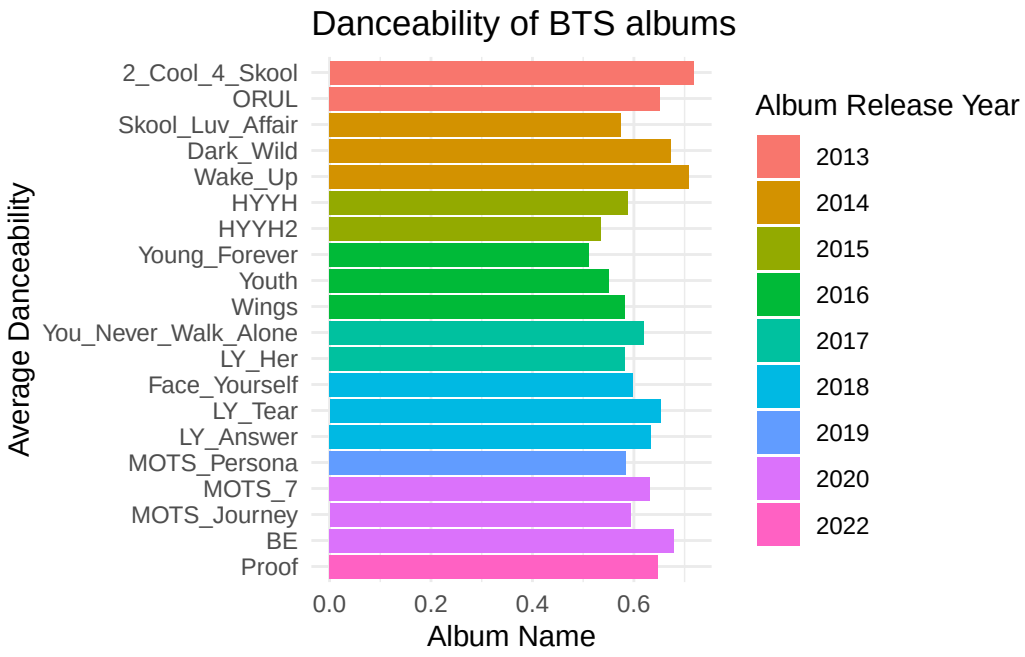

Figure 1: dance dance

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```
library(dplyr)
library(ggplot2)

BTS <- read_csv(here::here("inputs/data/BTS_mean.csv"), show_col_types = FALSE)
```

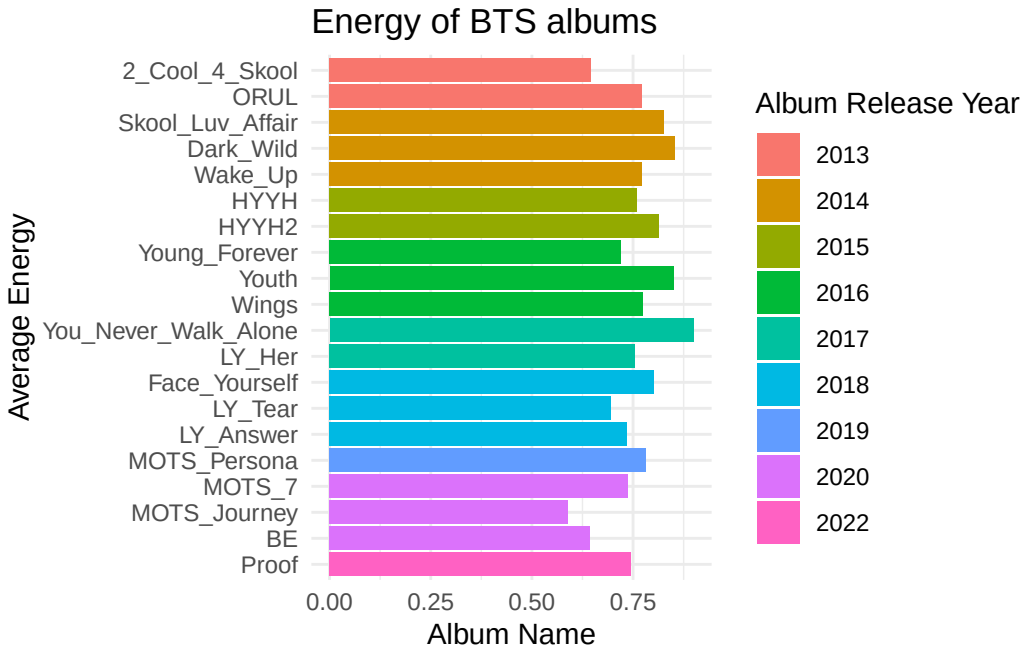


Figure 2: energy

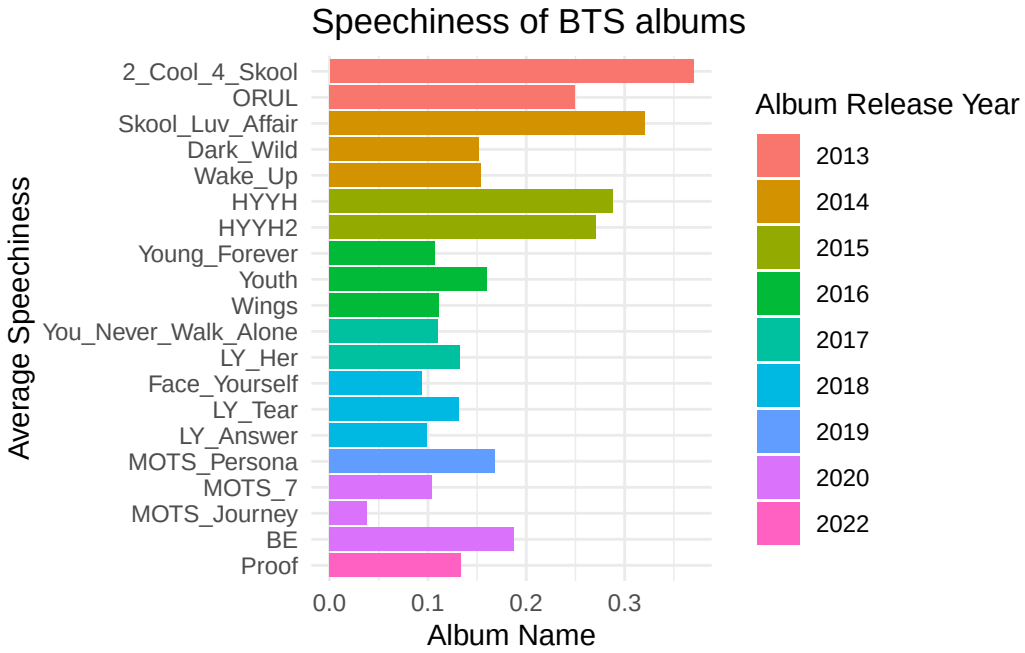


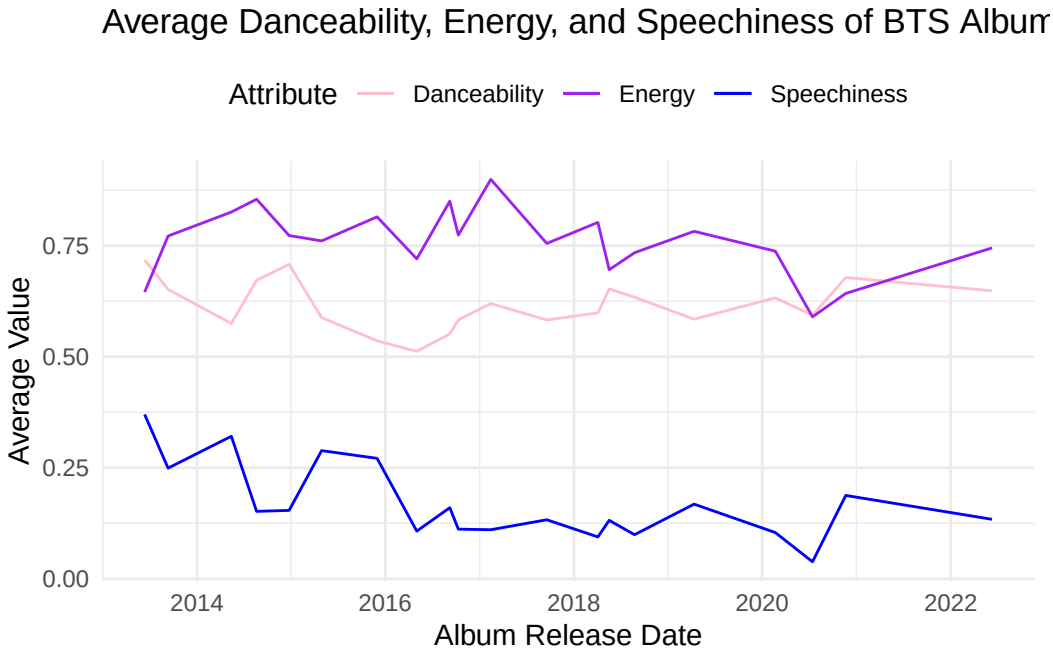
Figure 3: speechiness

```r
BTS$album_release_date <- as.Date(BTS$album_release_date)

# Finding the average danceability, energy, and speechiness of BTS albums
averages <- BTS %>%
  group_by(album_name, album_release_date, album_release_year) %>%
  summarise(avg_dance = mean(danceability),
            avg_energy = mean(energy),
            avg_speechiness = mean(speechiness)) %>%
  arrange(album_release_date)
```

```
`summarise()` has grouped output by 'album_name', 'album_release_date'. You can
override using the `.groups` argument.
```

```r
ggplot(averages, aes(x = album_release_date)) +
  geom_line(aes(y = avg_dance, color = "Danceability")) +
  geom_line(aes(y = avg_energy, color = "Energy")) +
  geom_line(aes(y = avg_speechiness, color = "Speechiness")) +
  labs(title = "Average Danceability, Energy, and Speechiness of BTS Albums",
       x = "Album Release Date",
       y = "Average Value",
       color = "Attribute") +
  theme_minimal() +
  scale_color_manual(values = c("Danceability" = "pink", "Energy" = "purple", "Speechiness
  theme(legend.position = "top")
```




```
    scale_x_date(date_breaks = "1 year", date_labels = "%Y")
```

```
<ScaleContinuousDate>
 Range:
 Limits:    0 --    1
```

‘‘‘

3 Model

4 Results

Lorem Ipsum

5 Discussion

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Appendix

A Additional details

B References