



Hot or Not? Trends of Billboard Top Hits

Project ME Squared

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Topic and Motivation

Popular music reflects broader cultural and social changes across time.

Songs that reach #1 on the Billboard Hot 100 represent the most commercially successful music in the United States, making them a useful way to study how popular music evolves. Using data on every #1 song from 1958 to 2025, our project examines how the characteristics of chart-topping music have changed across decades. By looking at shifts in musical style, lyrical topics, and artist demographics, we aim to better understand how the sound and cultural context of popular music have developed over time.

In our project, we ask: in what ways has the sound, content, and cultural representation of Billboard Hot 100 #1 songs changed over time?

Introduction of Data

DATA SET: Billboard Hits Dataset

- The source of this data is the Billboard Hot 100 Number Ones Data set. It was compiled by Chris Dalla Riva in research for his book *Uncharted Territory: What Numbers Tell Us about the Biggest Hit Songs and Ourselves*, who tracked every number one hit from between August 4, 1958 and January 11, 2025.
- The data catalogues a few different categories of information in terms of every Billboard Hot Number One song over a roughly 60 period, tracking things like song metadata, genre, lead vocalist, parent rating, divisiveness, where the artists were from, danceability, energy, demographic info, topic labels, etc. The dataset is a row-per-song record of all the tracks that hit #1 on the Billboard Hot 100 chart.

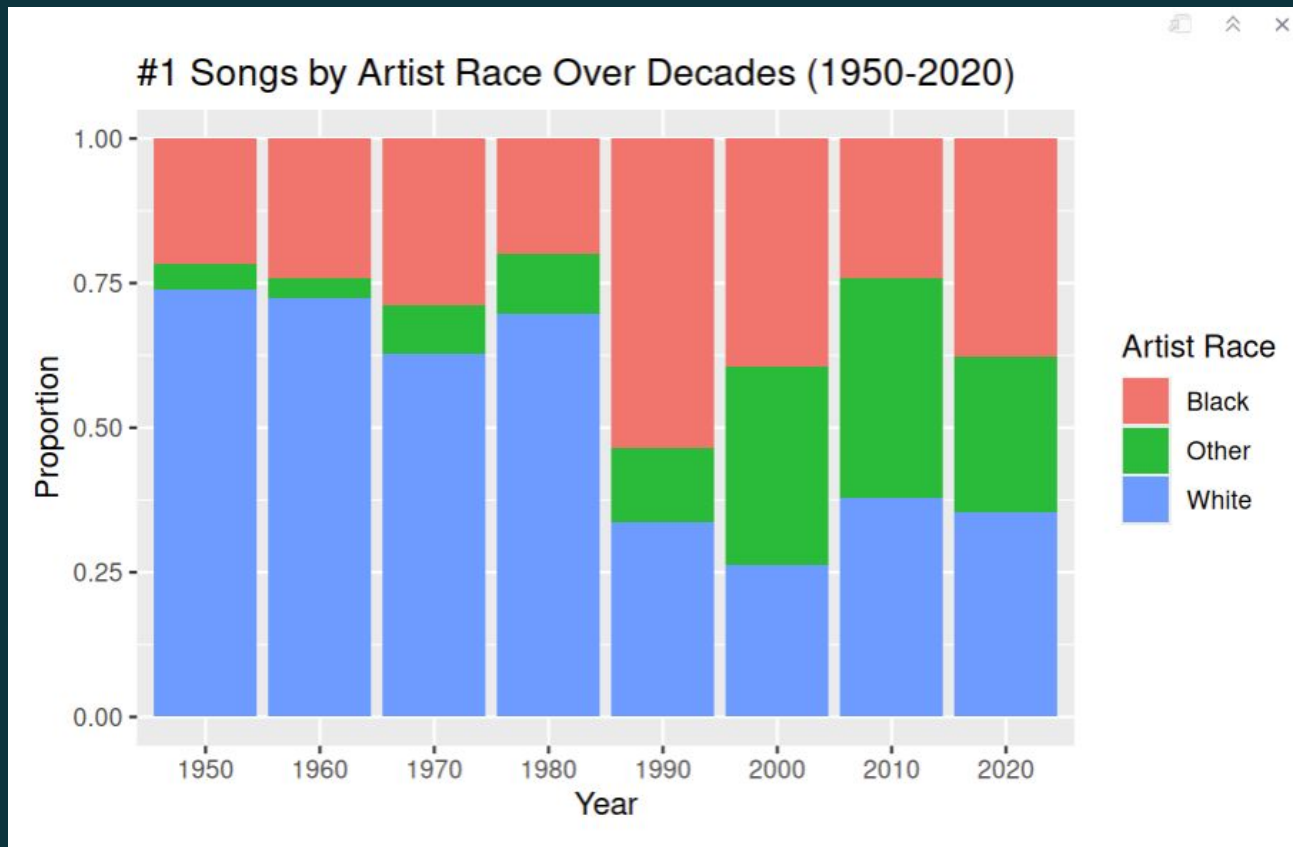
Our Data Set

DATA SET: Billboard Hits Dataset

Comprehensive list of every Billboard Number 1 Hit song from 1958-2025. Includes descriptive variable for each song and artist, relevant variables listed below.

Song Length	Song length in seconds
Danceability	Danceability measure from 0 to 100 as provided by Spotify
Race of Front Man	Categorized as white, black, or other. Race of primary artist
Explicit	Song labeled explicit if it contains expletives, or if it is overly sexual, violent, or related to drugs for the time of its release.
Song Topic	The main topic of the lyrics, we look at "Love", "Longing for Love", "Lust/Sex", "Partying", "Materialism", "Empowerment."

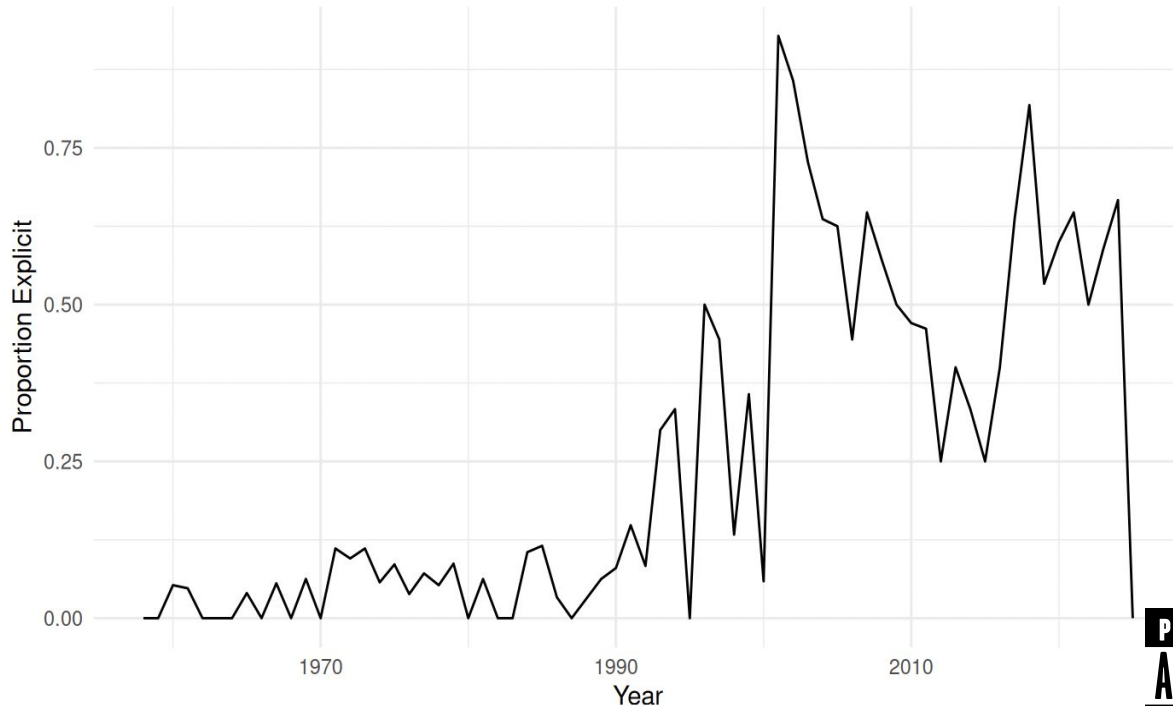
Artist Races Over Time



- White artists dominated #1 hits from the 1950s to 1980s
- Black artists representation increased significantly from the late 1980s onward
- Overall, based on the graph, the diversity has grown over time, with more representation from multiple different ethnicities in recent years
- You can see much more balance between the 3 categories

Explicitness Over Time

Proportion of Explicit #1 Songs Over Time

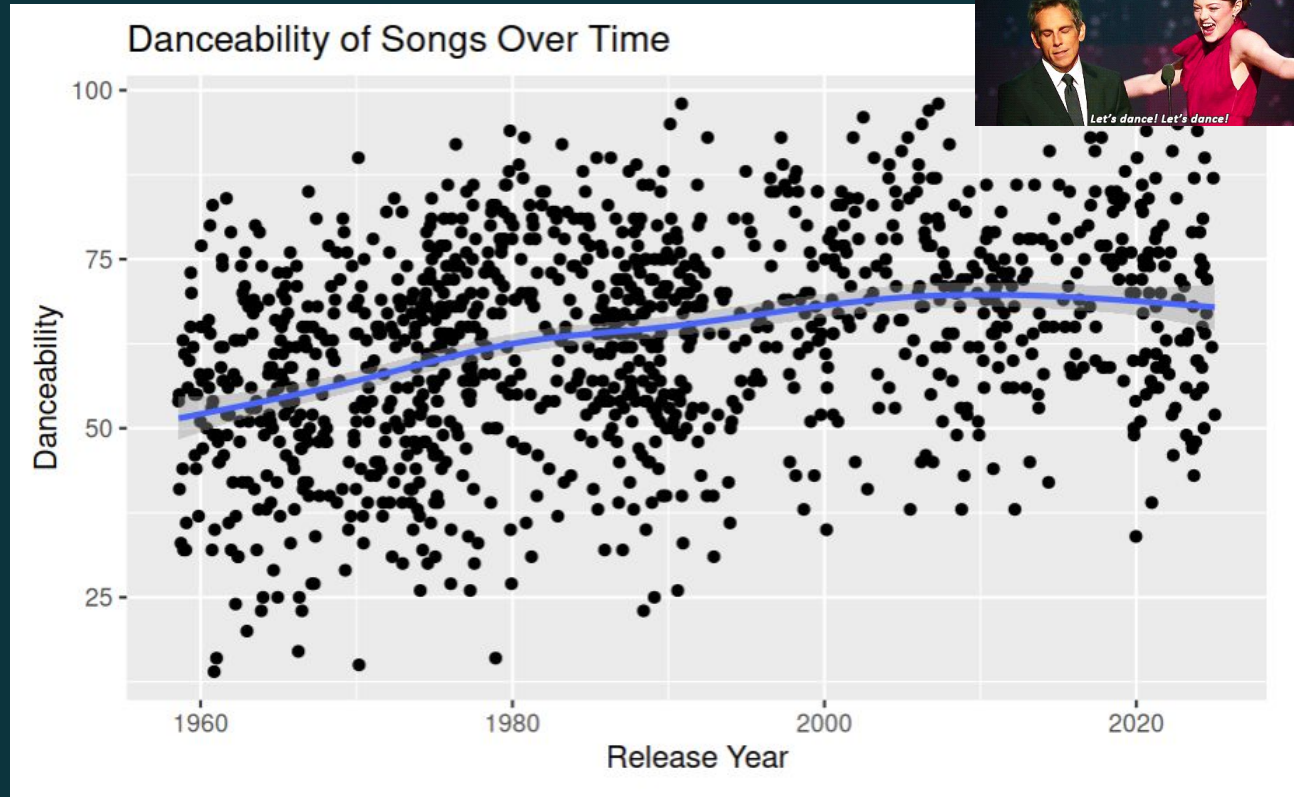


**PARENTAL
ADVISORY
EXPLICIT CONTENT**

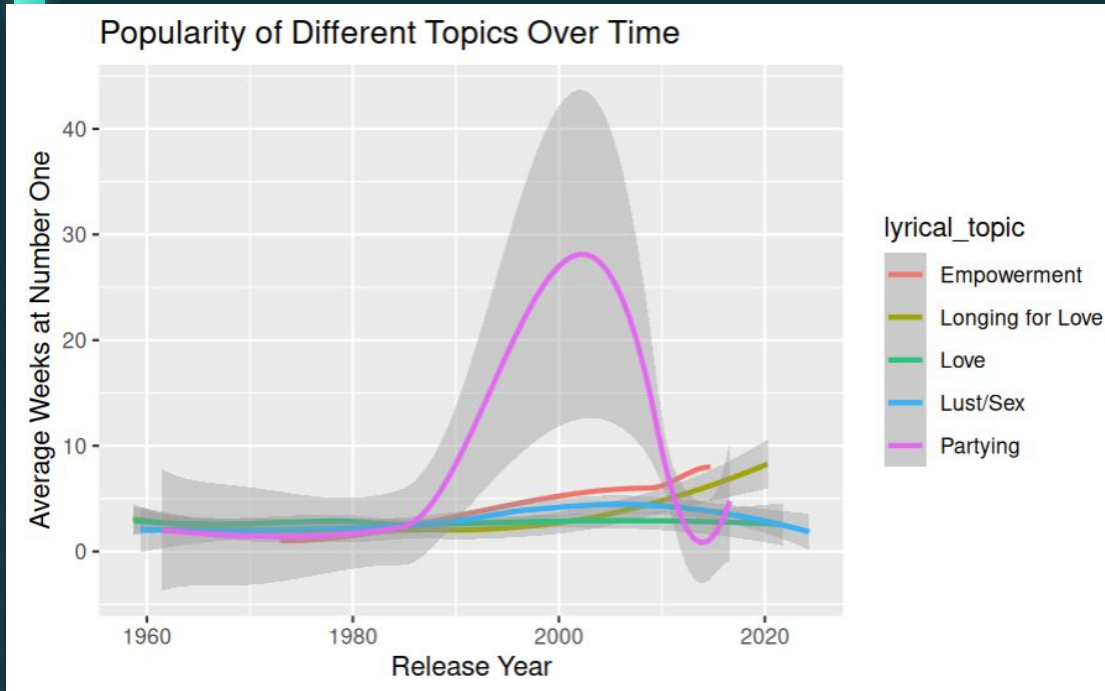
- Near 0 before the 1990s, sharp spike starting in mid-90s through 2000s
- Began declining again after this peak, rises again at around 2016
- Explicitness has become much more common over time
 - Changing norms on language and content have shifted (free speech movements)
 - Industry censorship has loosened

Danceability of Songs Across Release Year

- Slight positive relationship between the release date and danceability
- Gradual increase from around 1960 to 2000. After 2000
- Songs have generally become more danceable over time, but there is considerable variability
- Could be attributed to the rise of pop production, electronic music, and clubbing influence



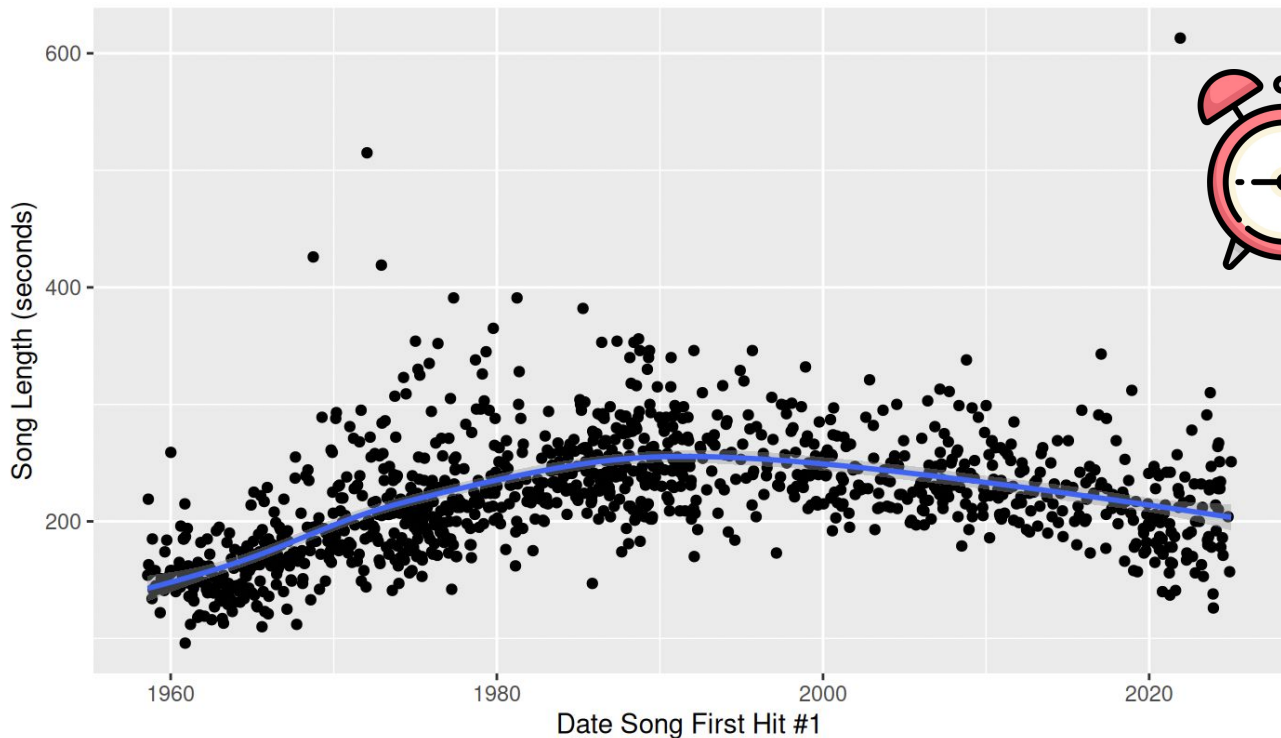
Popularity of Different Topics Over Time



- Partying spikes strongly around late 90s-early 2000s and then quickly declines
- Love-related themes remain relatively stable
- Empowerment and modern themes trend upward in recent years
- This plot shows a lot of variability in song content, which shows how the social trends and themes that influence songs are always fluctuating

Length of Billboard #1s Over Time

Length of Billboard #1 Hits Over Time



- Increases from ~1960 and peaks in the late 80s/90s
- Declines steadily in the 2000s-2020s
- Can see a slightly positive curvilinear relationship that begins to go down in recent times
- This likely reflects changes in our social culture – rise of short-form media, lower attention spans, streaming patterns, etc.

Conclusion

1. *Billboard #1 hits have evolved in sound, content, representation(race) over time*
2. *Music trends reflect broader cultural shifts and the periods of time in which they were released.*
3. *While some features, such as danceability and topics show patterns across the dataset, there is no single factor guarantees success at #1.*
4. *Across our plots, the main takeaway is that popular music has become shorter, more danceable, more explicit, more diverse in artist representation, and more oriented toward modern cultural themes over time.*