

Analysis of Spotify songs 1950 - now

By Kartik Kakar



Spotify®

Introduction

In this analysis, we'll learn about how music has changed over many years, which singers and types of music are popular, and how certain factors shape people's liking towards the songs. By looking at this data, we'll discover cool things about how music has grown and evolved throughout time.



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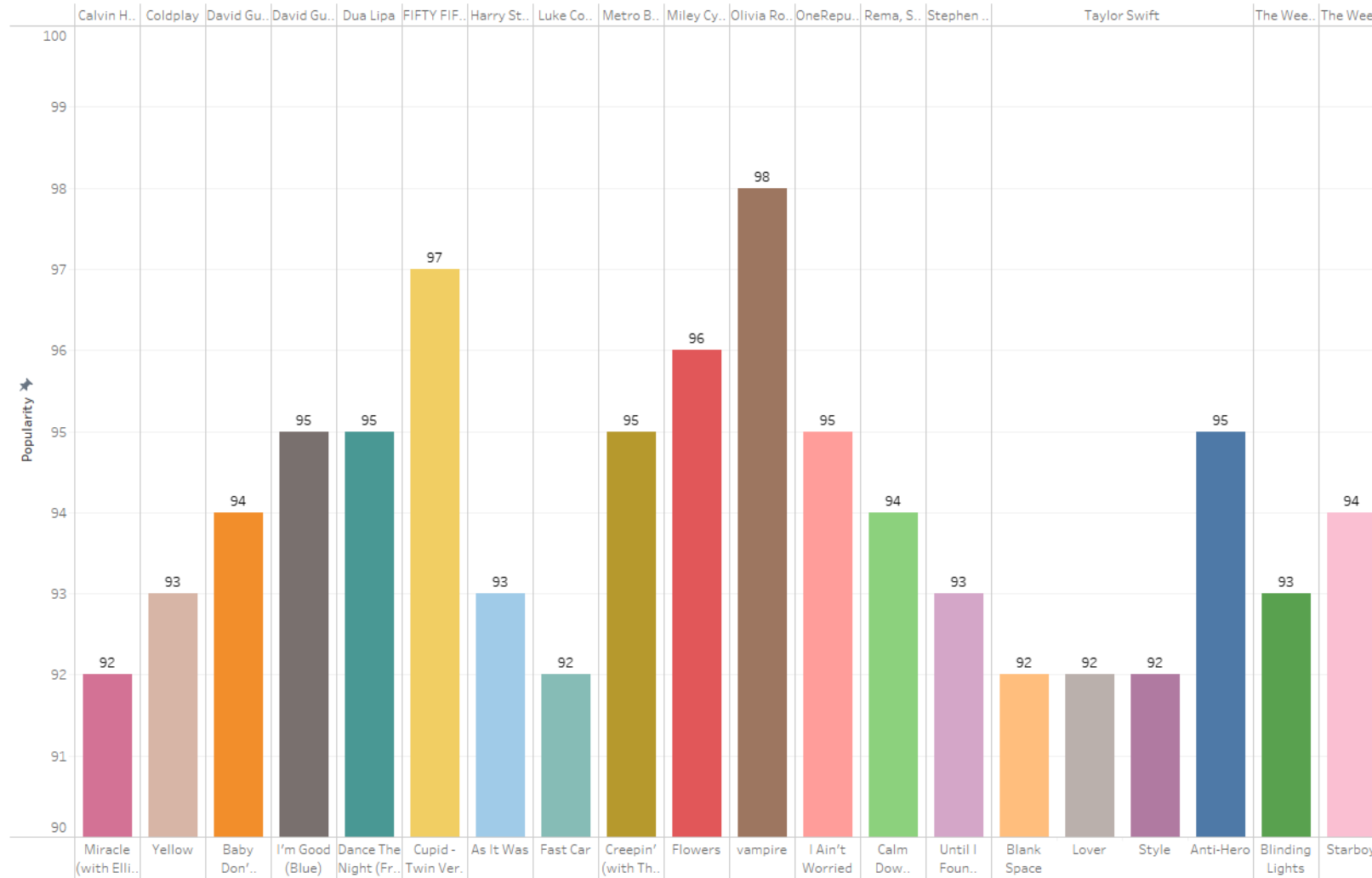
- Dataset overview
- According to this dataset:
 1. Most popular songs of all time
 2. Top artists and their song count
 3. Most streamed songs of top artists
 4. Co-relation between: ➤ Decade and popularity
➤ Energy, danceability and popularity
➤ Track duration and popularity
 5. Dominant genres and their evolution over the years

	Field
1	song_id
2	track_name
3	artist_name
4	album_name
5	album_artist_name
6	album_release_year
7	disc_number
8	track_number
9	track_duration
10	explicit
11	popularity
12	added_at
13	artist_genres
14	danceability
15	energy
16	key
17	loudness
18	mode
19	Speechiness
20	acousticness
21	instrumentalness
22	liveness
23	valence
24	tempo
25	time_signature
26	label
27	songscol

Data overview

- ▶ This dataset contains the top 10,000 songs on Spotify from 1950 to this current year.
- ▶ It is packed with thousands of songs, genres, artists and offers us a unique glimpse into how the music has evolved over time.

Most popular songs of all time



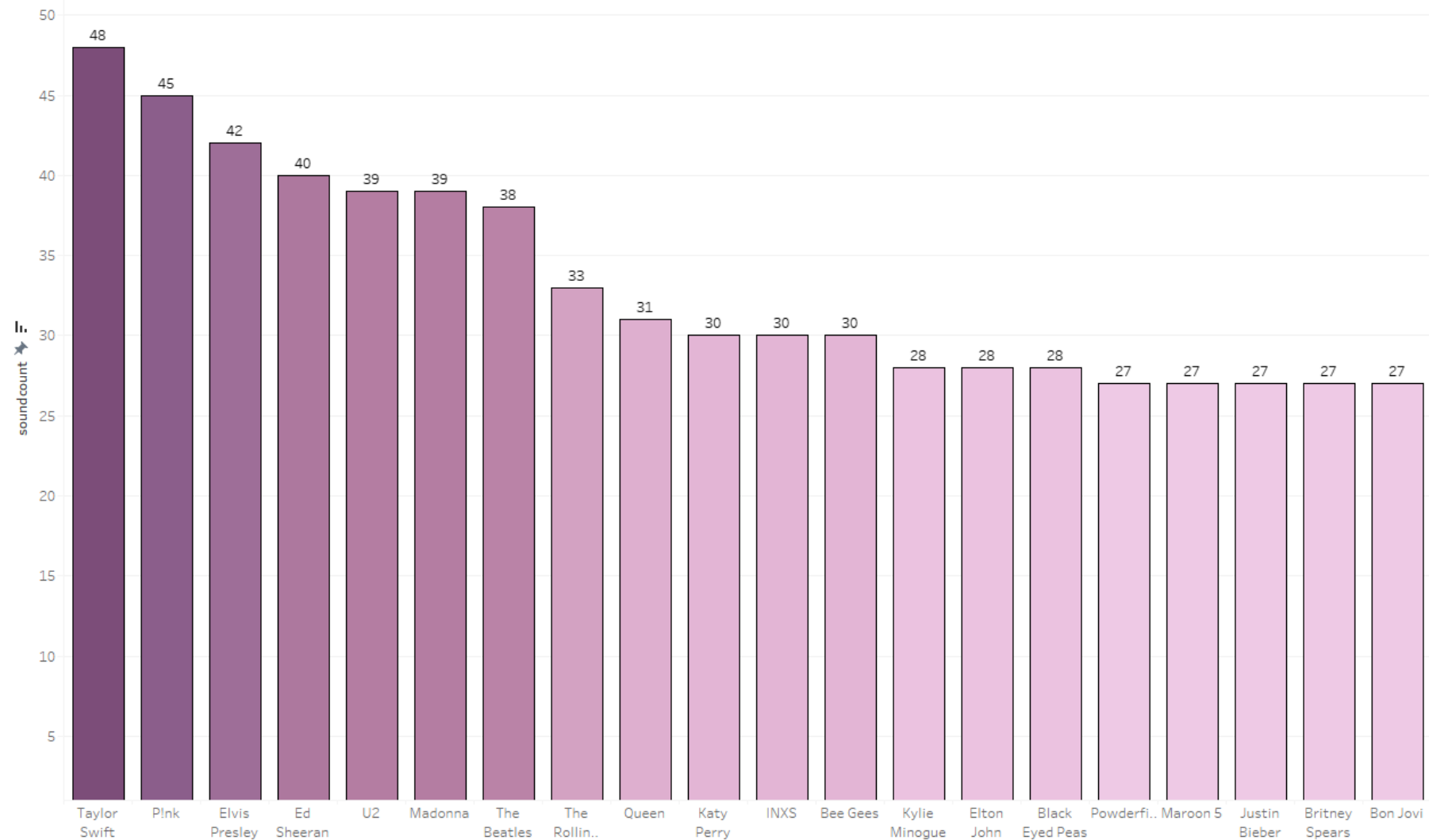
```
select track_name, artist_name, popularity
from songs
order by popularity desc
limit 20;
```

	track_name	artist_name	popularity
▶	vampire	Olivia Rodrigo	98
	Cupid - Twin Ver.	FIFTY FIFTY	97
	Flowers	Miley Cyrus	96
	Dance The Night (From Barbie The Al...	Dua Lipa	95
	I Ain't Worried	OneRepublic	95
	Anti-Hero	Taylor Swift	95
	Creepin' (with The Weeknd & 21 Sav...	Metro Boomin, The Weekn...	95
	I'm Good (Blue)	David Guetta, Bebe Rexha	95
	Baby Don't Hurt Me	David Guetta, Anne-Marie...	94
	Starboy	The Weeknd, Daft Punk	94
	Calm Down (with Selena Gomez)	Rema, Selena Gomez	94
	Until I Found You (with Em Beihold) - ...	Stephen Sanchez, Em Beih...	93
	Yellow	Coldplay	93
	Blinding Lights	The Weeknd	93
	As It Was	Harry Styles	93
	Style	Taylor Swift	92
	Miracle (with Ellie Goulding)	Calvin Harris, Ellie Goulding	92
	Lover	Taylor Swift	92
	Blank Space	Taylor Swift	92
	Fast Car	Luke Combs	92

Song count of the Top 20 artists

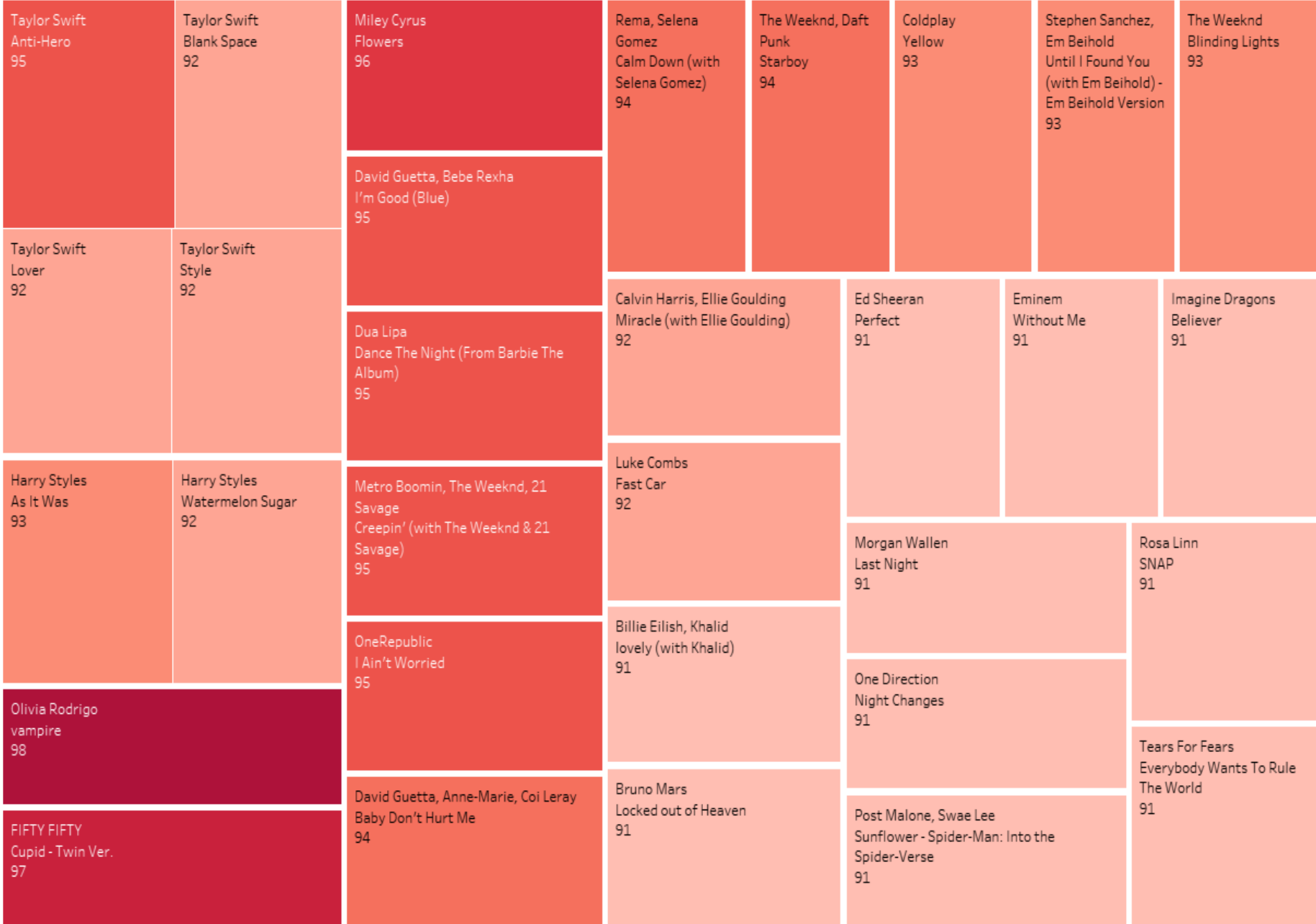
```
select artist_name, count(*) as soundcount
from songs
group by artist_name
order by soundcount desc
limit 20;
```

	artist_name	soundcount
►	Taylor Swift	48
	P!nk	45
	Elvis Presley	42
	Ed Sheeran	40
	U2	39
	Madonna	39
	The Beatles	38
	The Rolling Stones	33
	Queen	31
	Bee Gees	30
	INXS	30
	Katy Perry	30
	Kylie Minogue	28
	Black Eyed Peas	28
	Elton John	28
	Maroon 5	27
	Britney Spears	27
	Justin Bieber	27
	Powderfinger	27
	Bon Jovi	27





Most streamed songs of the Top Artists (popularity > 90%)



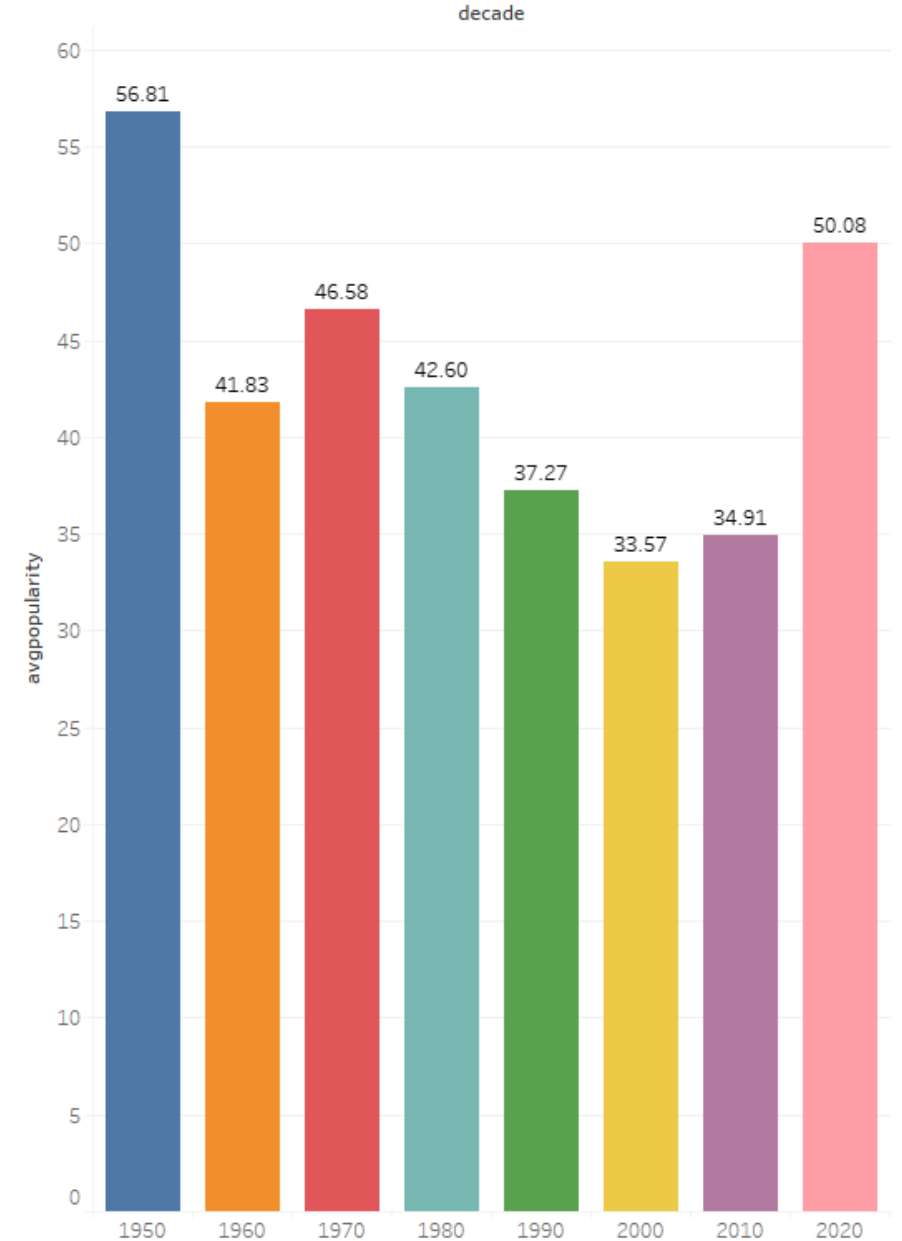
```
select artist_name, track_name, popularity
from songs
where popularity > 90
order by artist_name desc;
```

	artist_name	track_name	popularity
▶	The Weeknd, Daft Punk	Starboy	94
	The Weeknd	Blinking Lights	93
	Tears For Fears	Everybody Wants To Rule The World	91
	Taylor Swift	Anti-Hero	95
	Taylor Swift	Style	92
	Taylor Swift	Lover	92
	Taylor Swift	Blank Space	92
	Stephen Sanchez, Em Beihold	Until I Found You (with Em Beihold) - ...	93
	Rosa Linn	SNAP	91
	Rema, Selena Gomez	Calm Down (with Selena Gomez)	94
	Post Malone, Swae Lee	Sunflower - Spider-Man: Into the Spi...	91
	OneRepublic	I Ain't Worried	95
	One Direction	Night Changes	91
	Olivia Rodrigo	vampire	98
	Morgan Wallen	Last Night	91
	Miley Cyrus	Flowers	96
	Metro Boomin, The Weekn...	Creepin' (with The Weeknd & 21 Sav...	95
	Luke Combs	Fast Car	92
	Imagine Dragons	Believer	91
	Harry Styles	As It Was	93
	Harry Styles	Watermelon Sugar	92
	FIFTY FIFTY	Cupid - Twin Ver.	97
	Eminem	Without Me	91
	Ed Sheeran	Perfect	91
	Dua Lipa	Dance The Night (From Barbie The Al...	95
	David Guetta, Bebe Rexha	I'm Good (Blue)	95
	David Guetta, Anne-Marie...	Baby Don't Hurt Me	94
	Coldplay	Yellow	93
	Calvin Harris, Ellie Goulding	Miracle (with Ellie Goulding)	92
	Bruno Mars	Locked out of Heaven	91
	Billie Eilish, Khalid	lovely (with Khalid)	91

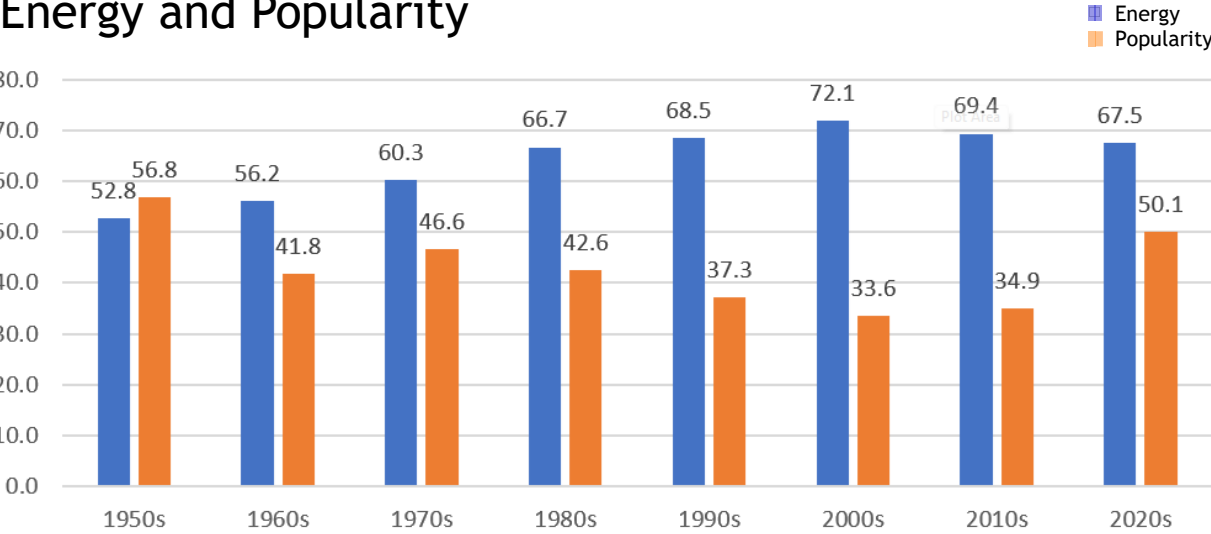
Correlation between decade and popularity

- The songs from 1950s and 2020s have the highest popularity based on this dataset.
- The least popular decade was the 2000s.
- These are based on various factors such as length of a song, energy, danceability and its genre.

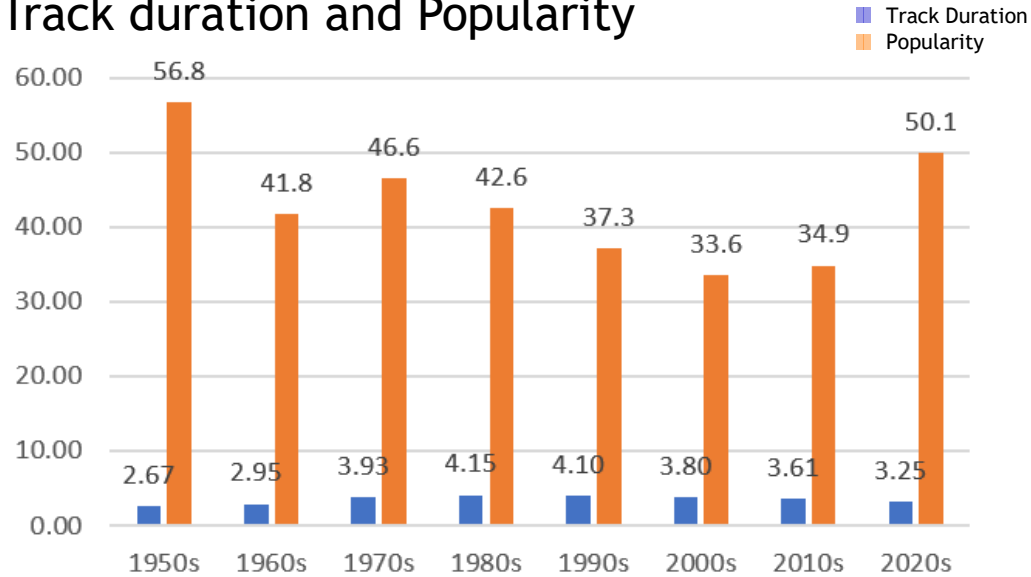
```
select concat(substr(album_release_year, 1,3), '0') as decade,  
avg(popularity) as avgpopularity  
from songs  
group by decade  
order by decade desc;
```



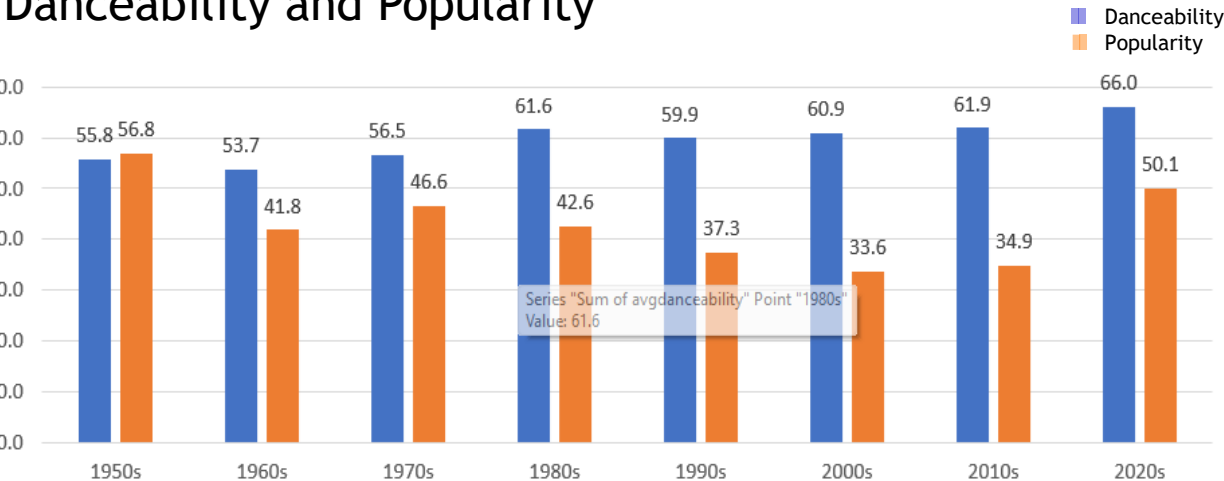
Energy and Popularity



Track duration and Popularity



Danceability and Popularity



SQL QUERY

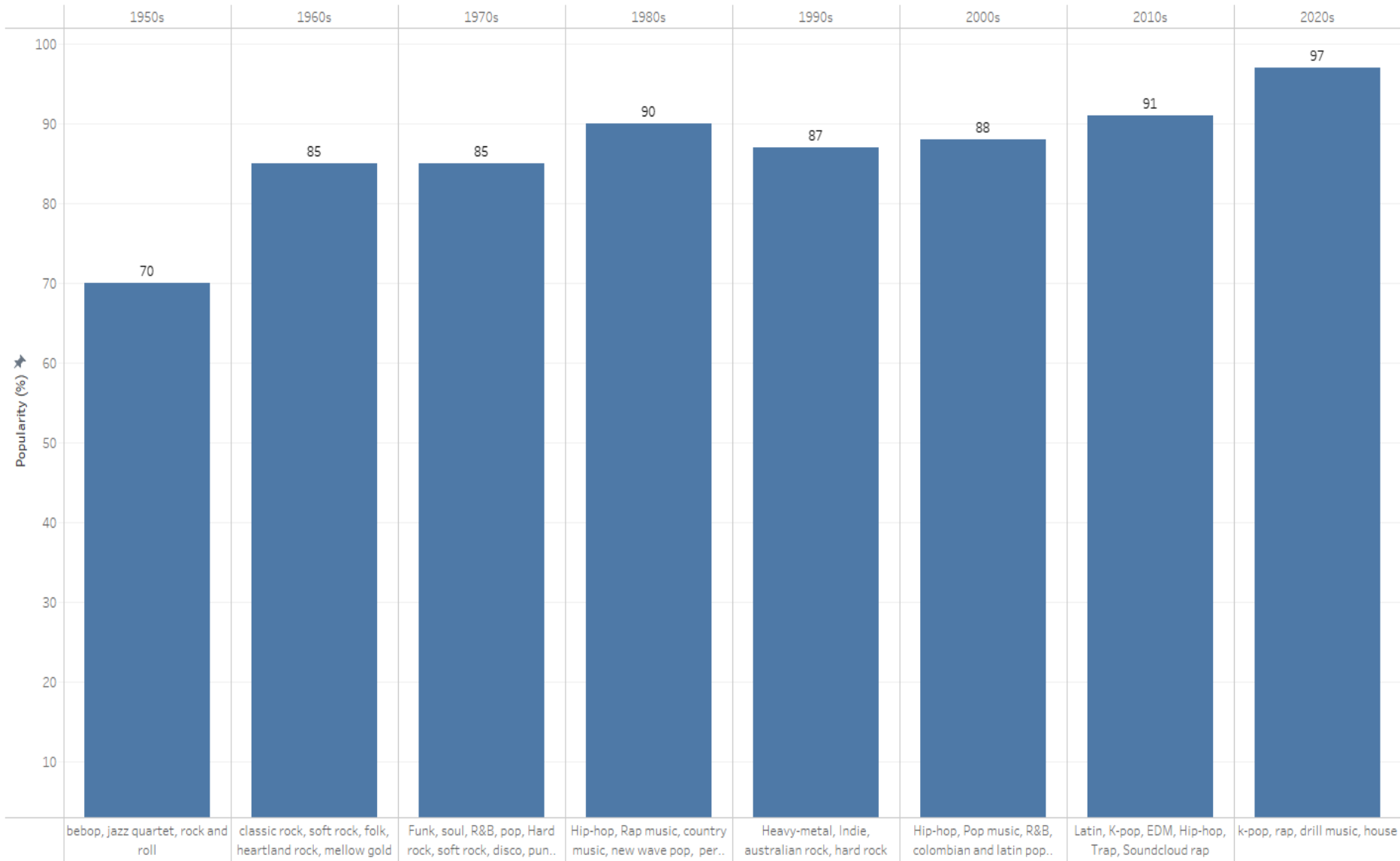
```
select
CONCAT(SUBSTR(album_release_year, 1, 3), '0s') AS decade,
avg(energy)*100 as avgenergy,
avg(danceability)*100 as avgdanceability,
avg(popularity) as avgpopularity,
avg(track_duration)/(1000*60) as avgduration
from songs
group by decade
order by avgpopularity desc, avgdanceability desc,
avgenergy desc, avgduration desc
```

Other factors that can influence popularity:

- ▶ Subjective interpretation
- ▶ Change in listening preferences
- ▶ Cultural trends and societal changes
- ▶ Media exposure
- ▶ Peer Influence
- ▶ Nostalgia
- ▶ Changes in genres

Dominant genres and their evolution

Musical trends over the decades



```
select distinct(concat(substr
(album_release_year, 1,3), '0')) as decade,
artist_genres,
avg(popularity) as avgpopularity
from songs
group by decade,
artist_genres
order by decade,
avgpopularity desc;
```

Conclusion

Tools used:

- MySQL Workbench: Sort, manage and retrieved info from a huge dataset.



- Excel: Summarized info in tabular form and used pivot tables to get a better understanding.



- Tableau: Created graphs based on the dataset and visualized trends.  + a b | e a u

Dataset link: <https://www.kaggle.com/datasets/joebeachcapital/top-10000-spotify-songs-1960-now>

Thank you!